THE ARCHITECTURAL
REVIEW, SEPTEMBER,
1906, VOLUME XX.
NO. 118.

Photo: Arch. Rev.

THE CUSTOM HOUSE, DUBLIN.

Some Dublin Buildings.—II.

(*Conclusion.*)

DUBLIN had to make many efforts and to wait a long while before she got her University. In 1311 the Archbishop of Dublin obtained a bull from Pope Clement V. to establish a University for scholars, but the death of the prelate put an end to the project. It was revived in 1320 by his successor, who got a confirmation of the bull, drew out statutes, and set up the University in the church of St. Patrick. For lack of funds to support the students this also failed. Another abortive attempt was made by the Dublin Parliament in 1568. In 1585 Sir John Perrot, the Lord Deputy, tried to establish two Universities, the funds to be raised by the dissolution of St. Patrick's Cathedral. The archbishop defeated this scheme, but, convinced of the necessity for such a foundation, persuaded the mayor and citizens to grant the Augustine Monastery of All Hallows as a site for the college. Queen Elizabeth confirmed the grant in 1591, the work was begun in that year, and the first students admitted in 1593. The poverty of the country made the raising of money very difficult, and Tyrone's rebellion, by stopping supplies from Ulster where the Queen's endowment lay, nearly put an end to the work. But the State took it up, and later on the benefactions of James I. and Charles I. firmly established the foundation.

The first addition to the Elizabethan building was the library, begun in 1712 from the designs of Thomas Burgh, but probably from the usual scarcity of money was not completed until twenty years later. Originally it was raised above an arcaded piazza, and must have been a fine room. What is left of Burgh's work inside is of good and careful detail and excellent workmanship. Would that the same could be said of the alterations made in 1861! A reference to the views given will show how utterly the room was then spoiled. The new roof pushed out the walls, the piers and arches of the piazza failed and had to be made into solid walls, and the space so enclosed divided up into rooms.

To hark back, in 1759 Sir William Chambers was called in to modernise and extend the old college. His scheme swept away the Elizabethan brick building and what remained of All Hallows Monastery, and on the site of the former was placed the great western block which now faces College Green. Beyond this is the quadrangle, with hall and chapel on the north side and the theatre on the south, and beyond this again another court whose south side is formed by the library.

Chambers never visited Ireland to supervise his work. He sent a good sketch model of his design, which is still to be seen in the college, followed by the working drawings and specification, and for this he received the regulation 2½ per cent. commission. The building took more than twenty years to complete. Always correct and scholarly in detail, Chambers's work here is undeniably dull, and he did not make as much as he might have done of the opportunities afforded by so splendid a site. The centre block, with its widely spaced columns and pilasters, is not happy in its proportions, but the wing pavilions in themselves are fine. As a whole it does not bear comparison with the vigorous and monumental work of his pupil Gandon at the Custom House, which we shall consider later on.

The design of the provost's house is taken from one in Campbell's *Vitruvius Britannicus* attributed to Lord Burlington. The copyist, whoever he was, carried out his work well, and the interior is spacious and dignified.

The Royal Exchange building was the outcome of a competition, held in 1769, in which several architects took part. The winning design was by Thomas Cooley, an Englishman; James Gandon (whose first effort this was to secure work in Ireland) was placed second, and T. Sandby third. Competition methods then were even less satisfactory than they are now. Competitors brought to bear all the influence they could command to control the decision. Gandon had the powerful backing of the Beresford family, and used it. On the other hand, his design was badly "slated" by an anonymous pamphleteer. In the end the Dublin merchants remained unmoved, and the work was given to Cooley. This architect, a man of considerable accomplishment, as this and other works show, began life as an apprentice to a carpenter. The winning of this competition brought him to Dublin, where he remained to practise. It will be remembered that he was consulted by the House of Lords, and a scheme for extensions entrusted to him, which fell through. He also built a new prison and designed the Courts of Law, of which only a beginning had been made at the time of his death, the work being carried on by Gandon, who is usually credited with being the sole architect. The Royal Exchange took ten years to build, and, as a contemporary chronicler puts it, "the expenses, amounting to about £40,000, were defrayed by

THE CUSTOM HOUSE, DUBLIN.

PROVOST'S HOUSE, TRINITY COLLEGE. THE BALLROOM.

Photo: Arch. Rev.

TRINITY COLLEGE LIBRARY. FROM A PRINT PUBLISHED IN 1793.

CEILING IN BELVEDERE HOUSE.

CEILING, ST. STEPHEN'S CLUB.

Photos: Mayne.

lottery schemes conducted by the merchants of Dublin with an integrity that will do them immortal honour." The building is now the City Hall, and its stately interior destroyed by being cut up into municipal offices.

Before dealing with his chief work, the Custom House, some account should be given of the architect, James Gandon, whose name has frequently occurred in the course of these notes. He was born on February 29, 1742, in New Bond Street, his grandfather being a French Huguenot, who came to this country on the revocation of the Edict of Nantes. He became a pupil of Sir William Chambers, and it must have been soon after the completion of his apprenticeship that with Woollfe he prepared and published in 1767 the two final volumes of *Vitruvius Britannicus*. Eighteenth-century architects had no scruples about bringing their names before possible patrons and the public by publishing their own or other people's designs.

Soon afterwards he won in a competition of architects his first work, the County Hall and Prison at Nottingham. This was carried out in 1769–70. While he was at work on this the Royal Academy had been founded, had held its first meeting in December 1768, and offered the first gold medal for an architectural design, the subject being a Triumphal Arch to commemorate the Seven Years' War. Gandon was very anxious to compete for this, and only to enable him to do so became an Academy student, with the result that he succeeded in carrying off the coveted medal. This was in 1769, the same year in which, as we have seen, he competed for the Dublin Exchange. He continued to practise in London, and in 1776 won the first prize in a competition for Bethlehem Hospital, but the carrying out of the work was given to another architect. Gandon had several powerful friends, and one of them, Lord Carlow, invited him to make plans for a new custom house, docks, etc., in Dublin. The scheme was kept as quiet as possible owing to strong opposition from the City authorities and the people of Dublin to the Government's acquisition of the site. When everything was supposed to have been arranged, Gandon went over to Ireland to start the work, but found that for some time he had to remain practically in hiding, and not go near the site for fear his presence in Dublin should be known. The land was a marshy swamp, and, moreover, liable to flooding by high tides, and the problem of foundations was a difficult one to solve. When at length a start was made, the site enclosed, and excavation begun, the Corporation made a demonstration, and pulled down some walling. The mob also broke loose, and Gandon, who feared that it would fill up his trenches, was relieved to find it amusing itself by swimming in them! After this he was left in peace. The foundations alone took sixteen months to complete, and the difficulties of the architect, and how he overcame them, are told in his life. Mr. Blomfield ("History of the Renaissance in England") in a footnote quotes the description of the Cupola foundations.

In the course of the work Gandon discovered a very able native sculptor, Edward Smith. He had been working under the master mason, and when brought to the architect's notice was at once given a chance to make a model for the great Royal Coats of Arms on the balustrade above the wings in competition with Carlini, who, with Joseph Banks, had made and sent over from England models for the statuary. Gandon was delighted with Smith's design, gave him the work, and thereafter employed him as sculptor and carver. Among other work he executed the splendid series of river-god keystones.

The building of the Custom House took ten years, and gave its architect an immense amount of trouble. The composition is a very fine one, grouping well from all points of view, and the details are worked out with great knowledge and taste. Its crowning feature, the cupola, may have been inspired by those of Wren at Greenwich, with which it has many points of resemblance, notably the plan and design of the drum and peristyle with its coupled Corinthian columns. The latter are, perhaps, its weakest point, offering too great a contrast of scale to the great order of the main building below. The whole work, however, certainly secures for its designer a place among the greater architects of the century, and shows him to be one who carried on an earlier and more vigorous tradition at a time when the style was fast becoming frigid and lifeless. A consideration of Gandon's life and works leads me to dissent from Mr. Blomfield's opinion that "his interest in architecture lay rather in its mechanical than its artistic side," although I agree that "he was a bold constructor and a man of powerful imagination." I think his buildings show that he must have taken great personal pleasure and care in the purely architectural part of his designs, and his immediate recognition of the sculptor Smith's talent proves that he was a sure judge of the artistic capacity of those who worked under him. Even when he had retired to his house at Lucan, at the age of sixty-six, being then, as all his life, a martyr to hereditary gout, he was not altogether (as Mr. Blomfield says) "occupied with planting." He interested himself in various artistic and architectural matters, and his idea (for which he made designs) of making Westminster Bridge into a triumphal one, as a memorial of our naval victories,

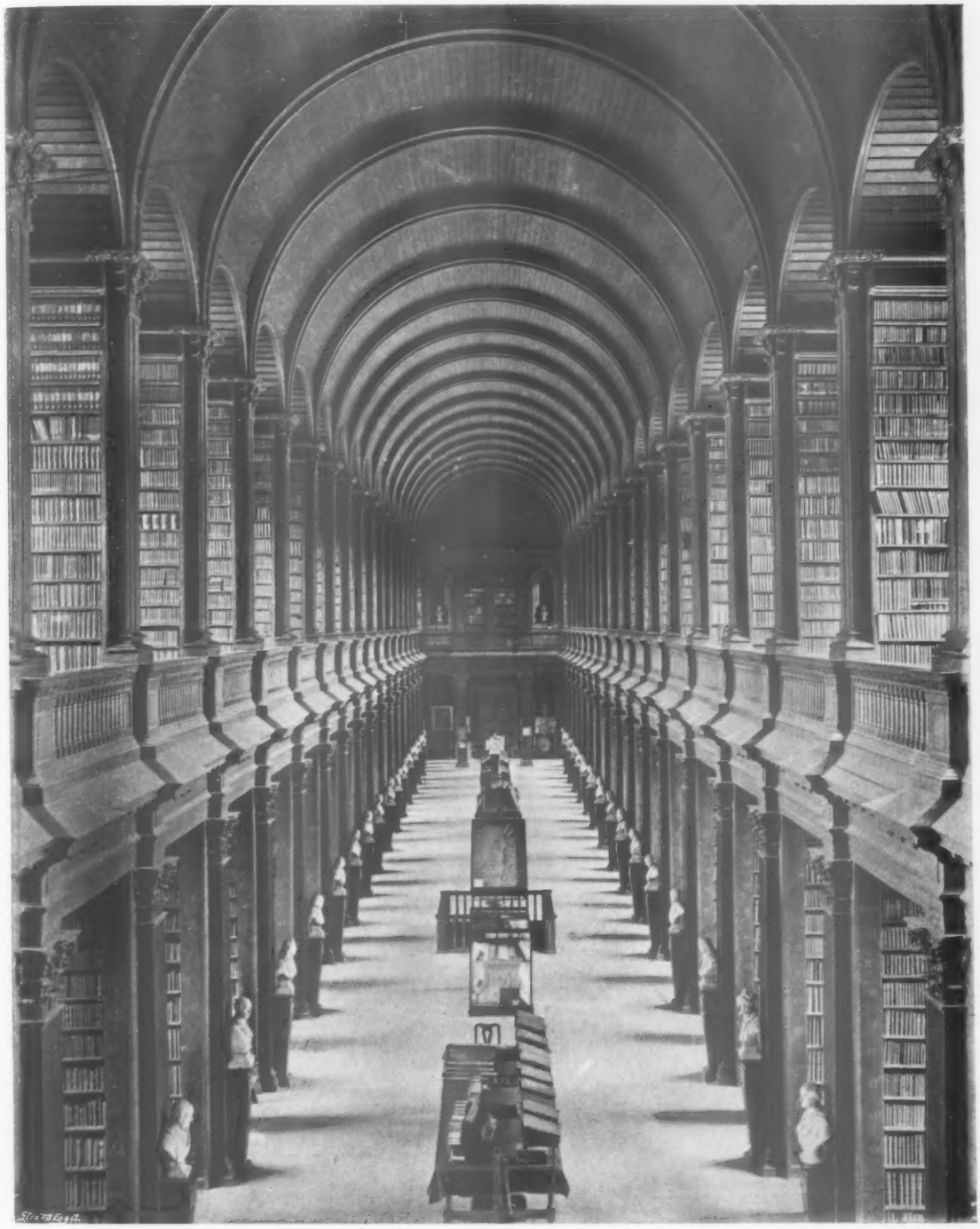


Photo: Arch. Rev.

THE LIBRARY, TRINITY COLLEGE.

Photo: Arch. Rev.

MAIN PORTICO, CUSTOM HOUSE.

Photo: Arch. Rev.

THE CUSTOM HOUSE, CENTRE BAY AND DOME.

Photo: Arch. Rev.

THE PROVOST'S HOUSE, TRINITY COLLEGE.

Photo: Arch. Rev.

TRINITY COLLEGE, DUBLIN.

Photo: Arch. Rev.

TRINITY COLLEGE. DETAIL OF BAY AT WEST END.

Photo: Mayne.

CEILING, OFFICES OF CHURCH REPRESENTATION BODY.

was a striking project, and surely showed his strong liking for the purely architectural aspects of his art. Gandon retired in 1808, under circumstances which we shall notice when writing of his last work, the King's Inns, and died in 1823.

The provision of new buildings for Law Courts and legal offices was first taken in hand in 1776, and the designs were made by Thomas Cooley, who has been mentioned before. The first block started was to contain the Office of Records, and this was only partially built when the architect died and was succeeded by James Gandon. It is probable that Cooley laid out the plan of the whole building, and that Gandon only carried it out on these lines, varying perhaps the details. The progress of the building was then delayed until 1786 by the difficulties of clearing the site—a crowded area—and dispossessing the people; and even thereafter the work seems to have dragged along hampered for want of funds and other troubles. When the foundation stone of the main block had been laid in state by the Lord Lieutenant, and everything was ready to go forward, a certain right honourable gentleman, irate at not having been consulted, threatened to have the building pulled down if it went on as planned. What grounds he had for this opposition we are not told, but his position and influence were strong enough to oblige the government, in order to avoid trouble and litigation, to humour him, and Gandon, much to his regret, had to set back his portico (which was to have covered the footway), thereby further curtailing an area barely sufficient for the accommodation required.

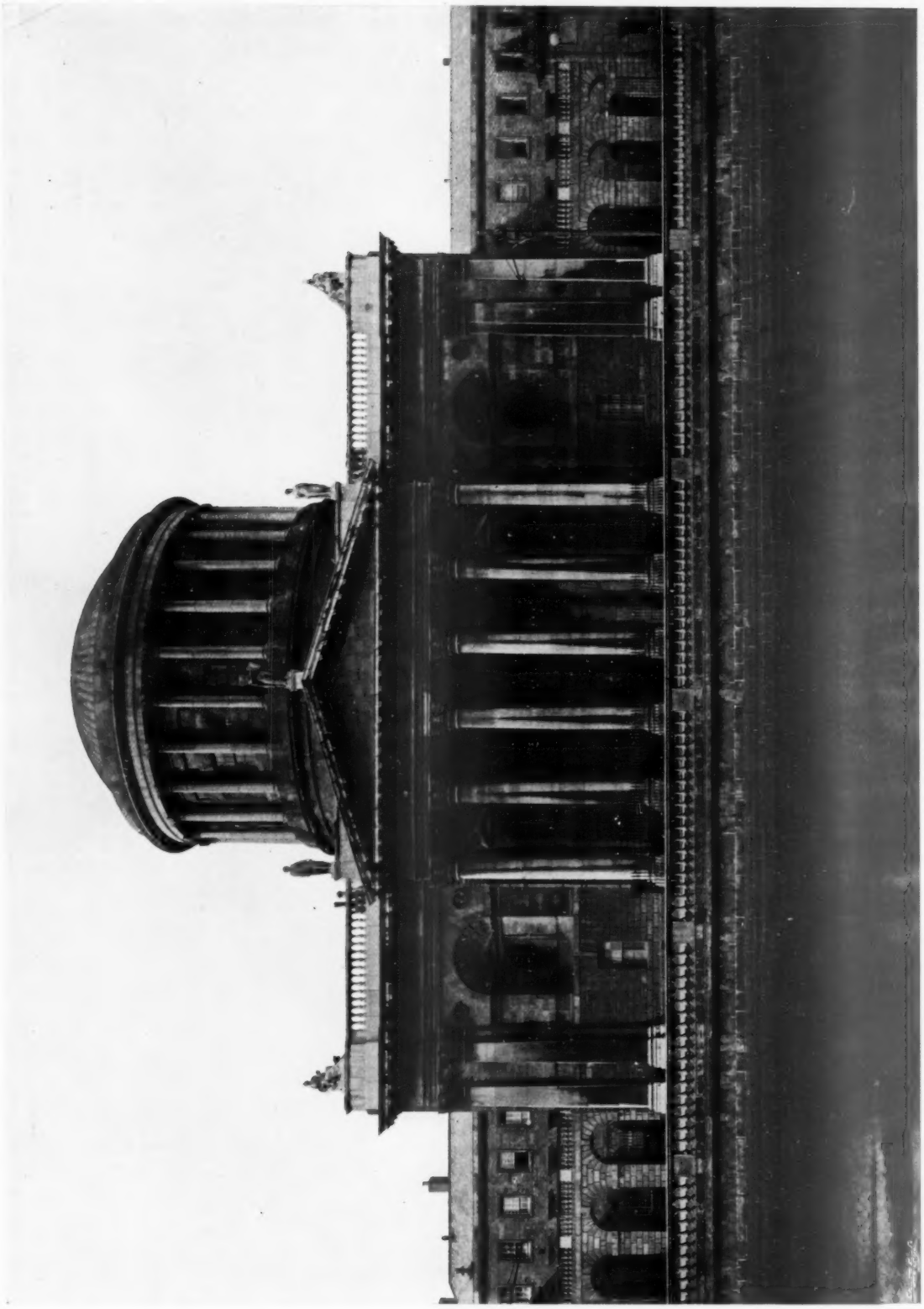


Photo: Arch. Rev.

THE FOUR COURTS. CENTRE OF RIVER FRONT.

THE CITY HALL, FORMERLY THE ROYAL EXCHANGE.

In spite of its river frontage, imposing mass, and fine lay-out, the building is rather a depressing one. The flat crownless dome springing without preparation from the great rotunda has a hungry look, and one wonders how Gandon, with the fine feeling for outline shown in his Custom House, could have designed it.

The last block, the King's Inns, was still incomplete in 1808, and the Lord Chancellor, irritated by delays for which the architect was in no way responsible, wrote a sharp letter. Gandon in his reply, after rebutting the charges brought against him, resigned his position, recommending that the work should be completed by his pupil Baker, who had all his drawings and instructions and was capable of carrying them out.

The public buildings which we have illustrated are those architecturally most important, but the lesser ones of this period, such as churches, schools, and hospitals, have an interest of their own. In an age in which architects were required to study and work in one style only, it was possible for them more easily to reach a high level of accomplishment. If this restraint tended to check originality it at least prevented displays of ignorance and vulgarity, and small as well as large buildings, if often dull, possessed some good features of the prevalent style and taste.

The town houses built by the nobility and landed gentry were, like those in England, planned more with a view to spacious entertaining than domestic comfort, their halls and staircases especially being on a very generous scale. The ordinary doorways are of a good and quite individual type, differing considerably from the same class in London. The use of ornate plaster decoration, much of it evidently modelled *in situ*, was almost universal in these Dublin houses, even the smaller kind having rich cornices, and there must have been a large number of skilled workers in stucco, foreigners most likely, both in the early part of the century and later when the influence of the Adam school had made itself felt. Mahogany was used for stairs and doors, and in Tyrone House (1740) a contemporary account says, "the oak perkenten floors are curious, being laid out in diamonds from eighteen to twenty inches square."

With the passing of its Parliament, Dublin gradually lost the occupiers of these lordly houses. Many of them have now become clubs and other institutions, and some, alas! have been dismantled and cut up into tenement dwellings.

In concluding these notes I wish very gratefully to acknowledge my indebtedness to Sir Thomas Drew for his kindness in placing his own wide knowledge of Dublin and its buildings at my disposal, and also for directing me to other sources of information on the subject.

GODFREY PINKERTON.

Architectural Refinements.

A Reply to Mr. Prior.—I.

To the articles on the Architectural Refinements Exhibition at Edinburgh, which were recently contributed to this journal by Mr. L. Ingleby Wood, September 1905, and by Mr. Edward S. Prior, February 1906, I am privileged to add another; mainly as a commentary and supplement to the latter review.

By way of matter-of-fact introduction, and of limitation as to well-meant and kindly statements made by various parties, the readers of this article are advised that the entire amount of time devoted to observations in Italy has been less than ten months. It is, however, quite true, as Mr. Prior indicates, that the observations began thirty-six years ago, and also true that most of my activity in the matter has been within the last eleven years. Ten months' work in the field is, however, all that has been done in Italy. Outside of Italy there has been less than three months' work in the field, and this has been mainly in Northern France. Aside from Notre-Dame at Paris these observations in France were limited, with rare exceptions, to a single class of phenomenon, viz., to the vertical curves and to the lines of divergence in interiors (horse-shoe form of construction).

When the topic of mediæval constructive asymmetry is thus approached, by considering the limited territory of observation which has been covered, there will result two methods of looking at the subject broadly. One way is to emphasize the deficiencies of the observations, their lack of completeness and finish, and the hazard of arguing from the known buildings in one territory to those which have not been examined in another. The other way is to contend or concede that if any phenomena are proven definitely to exist, some others will certainly be found.

Between these two methods there is a third, viz., to push the really or apparently debatable cases well to the front; to devote to them the major amount of space and attention, to omit (or concede with excessive brevity) the crucial instances that point in another direction, and to wind up the treatment of the subject with an agnostic or negative conclusion and verdict, without further reference to these crucial instances.

The broad and general proposition that optical effects and illusions were frequently studied by the mediæval builders is conceded by Mr. Prior so rapidly and so briefly, that one easily overlooks this really important concession on his part to a "gospel which is good tidings to the mystic and the idealist, but foolishness to the craftsman." Let us rather linger for a moment over these points, which this reviewer disposes of so rapidly, although so favourably. For instance: "When a floor, for example, is raised toward the east end . . . we can recognise such ceremonial dignity as designed—but I do not hold with Mr. Goodyear that the secret of it has been lost. Even before Mr. Goodyear enlightened his American friends, we European architects had been making good use of such devices." Now the Edinburgh Catalogue mentions that "eighty-five examples of the sloping pavement (rising toward the choir) were examined and levelled in Italy in 1895" (p. 19). The above approval of these observations is not at all weakened by Mr. Prior's mention that this use is familiar to his own practice or to that of his friends. The treatment of perspective illusions in Mr. Prior's review has a brevity which may be the soul of wit, but which might be lengthened out to the greater satisfaction of the mystics and idealists who are seeking for crumbs of comfort in his article.

For instance, his only quoted mediæval example of a perspective illusion is the Cathedral of Poitiers. According to the reviewer the existence of perspective illusion at Poitiers is now generally admitted, but he appears to be somewhat of a neophyte and a new-comer in this topic when he mentions that this has "long been maintained by Mr. Goodyear." I never saw the Cathedral of Poitiers until 1903, and have never made any mention of this church which did not include the name of Mr. Fergusson. The credit for the observation at Poitiers belongs wholly to him. There were no photographs for Poitiers at Edinburgh. My own observations for perspective illusions have been confined to Italy as far as publication is concerned, and these observations are not debated or described by Mr. Prior, and here my complaint as to brevity applies. It is really a total omission. He only says: "In a less theatrical way (than at Poitiers) the optical illusion has been used in all architecture to enhance the dignity of the principal or sacred object." Quite so! I have published some twenty-eight Italian mediæval examples of this use aside from the sloping pavements, none of which are theatrical, and all of which had consequently been overlooked until I published them. This being so, how does it happen that "Mr. Goodyear's gospel will be good tidings to the mystic and the idealist, but to the craftsman it is foolishness"?

Mr. Prior is too dexterous and expert a writer to have involved himself in a self-contradiction of which he is conscious. Striving to be fair, an effort which fairly bubbles and effervesces beneath

the surface of his finished and polished style, he still reminds me of a passage, which I take the liberty of quoting, from a recent letter addressed to me by Dr. Bernhard Berenson, who says: "I fancy you rapidly are passing from the 'not true' of one's earlier opponents to the 'not new' of one's later enemies." Carefully avoiding the implication that Mr. Prior is an enemy, although he appears to be an opponent, I should still be inclined to class him as a neophyte in the matter of perspective illusions, and of their deeply important relation to my investigation. Were it otherwise he could hardly embrace the gospel of the Edinburgh exhibits with one hand and reject it with the other. At all events all those who embrace this gospel must begin, as I did, with perspective illusions. Mr. Prior begins there.

Let it be once admitted that optical effects were studied by mediæval builders, and the gates are thrown wide open for a gospel which cannot be wholly foolishness when so adroit a debater as Mr. Prior has swallowed the first chapter without a gulp or a murmur. It is true that he numbered this chapter "No. VI." before he swallowed it, but here the older master of the given subject must be permitted to indicate the logical order of conversion. With a new gospel we naturally place in the foreground the dogma which can be proven most easily and most conclusively. This is the reason why the Edinburgh Catalogue, which opens with the associations between ancient and mediæval curves, because these came first in order of chronology, places the perspective illusions next in order. For the same reason the first article of the *Architectural Record* series of 1896–97, following the initial announcements, was devoted to perspective illusions, and this subject was continued into the opening of the next following article.

In the Edinburgh Catalogue I made no effort to exalt my own share or part in the recent acceptance of mediæval perspective illusions, preferring to put forward the more distinguished names of Auguste Choisy and Camille Enlart as champions of this chapter of the new gospel. If, however, the dates of their publications be compared with mine, the first announcements of the latter will be found to precede their own by about thirty years. If the multitude or variety of examples cited be in question, my publications in the *Architectural Record* for 1896, and my exhibits at Edinburgh, give my demonstrations a character for fullness and for priority of observation which these gentlemen have been the foremost to recognise. M. Choisy, for instance, wrote to me in 1905: "As regards the artifices of perspective illusion, you have given complete light," and M. Enlart has been most obliging in calling my attention to unpublished French examples. My reviewer may easily have overlooked the Catalogue matter for the perspective illusion in S. Stefano outside the walls at Pisa, which says: "It was the inspection of this church, on the first day of a visit to Pisa in 1870, which led the writer to undertake the observations of this Catalogue" (p. 36).

Moreover, having announced (in 1874), on the basis of one week's work at Pisa in 1870, that perspective illusion would be found widely diffused in mediæval buildings throughout Europe (*Scribner's Magazine*, August 1874, p. 440), I waited for twenty-five years for an opportunity to establish this contention. Meantime, I had full experience of an intense and universal scepticism regarding this prophecy, and it was only by slow degrees that my publications of 1896 were accepted as proof of this contention for the Italian peninsula. The instances noted more recently by Choisy and Enlart belong, however, to France, and it is quite positive that these mentions might be widely extended. St. Mary's, Frampton, Lincolnshire, and Canterbury Cathedral (G. A. T. Middleton in *Nineteenth Century Magazine* for March, 1897) are two English examples. They are not likely to be the only ones.

In 1870, when this research began at Pisa, the perspective illusions of the Bernini period, to which Mr. Prior confines his reference, aside from Poitiers Cathedral, were public property of the German compendiums, but it was the opinion of the authorities of that date that these illusions were confined to the late Renaissance decadence (see the early editions of Jacob Burckhardt's *Cicerone*), whereas these Renaissance theatrical devices now appear to be only corrupt and crude survivals of a much more subtle mediæval practice, as I have elsewhere pointed out. Thus Mr. Prior again appears as a neophyte in perspective illusions when he compares the Cathedral of Poitiers with the Scala Regia by Bernini, as an instance of a "theatrical" device. I am obliged to confess that I could not in my own experience detect the facts at Poitiers by observation of the eye, although they were known to me by Fergusson's publication. After taking the measures for the plan it was still impossible to observe by the eye a narrowing toward the choir of 11½ feet in a length of 304 feet. As regards the vaulting and arches I was unable, during repeated visits to the church, to perceive that they were lowered toward the choir, and if it were not for Fergusson's statement I would not believe to-day that the vaulting has this construction. Mr. Prior states that the arches lower, and erroneously quotes me for a fact which I have never mentioned. Fergusson only speaks of a lowering of the vaulting. I looked for both and could detect

neither. Now we understand by a "theatrical" illusion one which is easily detected on the stage of a theatre and which is only effective from beyond the footlights. I therefore submit that at Poitiers the illusion is not "theatrical," and that it is on the contrary extremely subtle. In the numerous Italian instances which I have published the subtlety is demonstrated by the fact that they were previously unpublished and that they have notoriously not been otherwise noticed as perspective devices.

The reviewer indulges in some gentle raillery "on the *hidden* grace of these refinements, which are not to be perceived by careless glances, and yield their secrets only to the initiated eye." Here again I must confess, without reflecting on the wide knowledge in English cathedrals of Mr. Prior, that the neophyte in perspective illusion is revealed. In my observation the "initiated eye" is no better than any other. It doubtless does seem reasonable to suppose that the eye of a man who has just taken the measurements in a church ought to perceive the discrepancies which he has just measured. From selected points of view and with strenuous effort this is frequently, but not universally, true. From casual or unselected points of view I think it is never true. The pride of the modern critic revolts against the suggestion that he cannot trust his own eyesight, but my pride has been thoroughly broken in this regard, in spite of Mr. Prior's bit of fun, which intimates the contrary.

So, too, Mr. Prior's delicate raillery suggests that: "Nothing but the authority and initiation of a 'mystery' could keep alive through generations and bring to perfection a scheme of design so recondite that, except on the supposition of an ineffable holiness attaching to it, it could not be perceived. Its secret was not in itself or its refinement, but in the success of its secrecy." Here I should like to add that the success lay, not in secrecy, but in the everyday, matter-of-fact, and commonplace physiology of optics. This is proven by the continued success, in our own day, of the measured and photographed device in the case of the observer who has just photographed and measured it. That the practices were traditional is certain, that they were not taught to men who were not masons is certain, and that they were not taught to all masons is positive. Some of them were apparently, however, "banded builders who did it all and said nothing," as the reviewer wittily suggests.

The reader will notice that I am still dwelling on perspective illusions, although the quotations from the debated review actually refer to all classes of phenomena. And my argument is this—All the ridicule as to the "ineffable holiness" of masonic secrets, etc., will apply to perspective illusions, and somehow or other it turns out that this ridicule lacks point and substance in that instance. Moreover, the ridicule would apply to Choisy and Enlart as well as to me, and this would be carrying the joke too far. Why then should we consider these particular objections as more than witty persiflage in face of the other phenomena?

It may be urged that perspective illusions are not dignified and are not to be recommended. To this we answer that our point of view is to study what the mediæval builders really did, and not what they ought to have done; second, that the practice was more or less exceptional, and that in Italy a vast number of churches which have other devices do not have this one, to say nothing of the very large number of mediæval churches which have no refinements at all; third, we urge the point that the study of perspective illusions enables us to prove that optical effects were considered by mediæval builders. Therefore this study helps us to prove, or consider possible, that other optical effects of a different character and more "legitimate" or more subtle nature were also practised; the demonstration for perspective illusion is the opening wedge, in other words, to a farther and more intimate study of mediæval building. For instance, in the Pisa Cathedral we find a vast number of phenomena which must be conceded to exist if the perspective illusions of that cathedral be conceded. In fact, these illusions themselves are of so subtle a character in that building that their success is their own justification.

Here, however, Mr. Prior is elusive (if not illusive): "Though he throw a dozen (churches) to the wolves, he may still escape with an example which is of such undoubted designed irregularity that it may rightly be called a refinement. This position must be left unassailed. Being unable to go myself and see St. Mark's, Pisa, and Fiesole, I bow to the authority of those who have seen." This would seem to be a sensible and amicable conclusion, if not carried too far. For instance, it might have prevented Mr. Prior from writing any adverse review whatever of an exhibition whose strong cards were drawn so largely from an Italian pack. And this would have been a pity, because I could not have answered Mr. Prior in that case. Still, one cannot help noting that this "bow to authority" winds up later on with the conclusion that Mr. Goodyear's "gospel" (about the Italian churches which Mr. Prior hasn't seen) is "foolishness to the craftsman." This is certainly a conspicuous fly in the ointment and solace which might otherwise be found "in a position which must be left unassailed."

Mr. Prior suggests his terror lest Mr. Goodyear "think this all a captious, carping way of presenting his discovery to the public." To this I can only answer that I find Mr. Prior's review very charming and fully equal to Mr. Gilbert's librettos. There is one improvement to be suggested in it, and I admit that the suggestion is a selfish one. I should have liked the review better if the passage about the wolves, which says that "this position must be left unassailed" and that the reviewer "bows to the authority of those who have seen," had concluded the article. Then that other sentence which now ends the review, about "a gospel which is foolishness to the craftsman," might have been worked in at some less conspicuous point. One is so apt to remember the climax and so apt to forget what goes before. Not that I would forget it, but others might.

Following Mr. Prior's own method of reclassifying debatable points, we will now take up his "Class V.—*Masoncraft habits*," which opens with the following passage:

"The Edinburgh Exhibition shows how constant in mediæval building was the sloping backwards of piers and arch jambs, often with a slight curvature, and Mr. Goodyear claims this as an entasis based on the classic column.[1]

"He is able to show that in many of his instances the idea of the lean having occurred through thrust is not tenable, for it is to be seen at the internal angles, where thrust would not be felt.[2] The piers which have it have evidently been built to have this backward curve. Is this then an architectural refinement?

"His critics point to the fact that these vertical leans of pillars, etc., follow the backward slope of the wall, so that the entasis of the pier is really part of the batter of the wall. It is curious that Mr. Goodyear in all his investigations of leans never once uses this common word 'batter' . . . It does not, therefore, seem necessary to credit the builders of Amiens with some subtle constructive skill, nor am I much impressed at Mr. Goodyear's discovery that the 'Suisse' there and the 'Bedeau' know all about it."

In considering this passage we first draw the line at the word "critics." Let us abandon the plural and say "critic." No one but the genial Mr. Prior has ever said in publication (or otherwise, to my knowledge) that the quoted instances can be explained as nothing but a "batter." If I have not used this word it is because I do not know, and do not believe, that the word "batter" applies to the facts in general or remotely covers them in any individual particular case. I have not only shown at Edinburgh, but I have also published in the Edinburgh Catalogue, as well as elsewhere,[3] the photographs which show the leans on both sides of the piers in the Amiens triforium, and this proves that they have no batter. I have no knowledge of any batter in the triforium or clerestory walls. The triforium wall at Amiens is nothing but a shell, less than 12 in. thick by personal measurement, and if it were proved to batter it would not explain why the piers of the nave have the vertical curves. There is no batter about these curves, and if there were it would not prove that they were not an æsthetic device.

It has to be conceded that the entasis was used in mediæval spires, in mediæval towers, in mediæval columns, and in mediæval pilasters: why then contest so desperately the æsthetic use of vertical curves in piers which are not pilasters? The contention that the entasis is only an optical correction must still concede the point that it is a refinement. Moreover, this contention shipwrecks on the frequent use of an entasis in Renaissance as well as in mediæval-classic pilasters. Within the limits of ancient Greek art the contention that the entasis is only an optical correction is a doubtful proposition which has been antagonized by the best authority.[4]

In a few years the mediæval use of the vertical curves will be universally conceded, and Mr. Prior's "batter" is a step toward such a concession on his part. His main anxiety is to show that all the demonstrated facts fall inside the lines of everyday probability and are allied to facts which are generally known. In this anxiety I heartily share. As soon as the facts are generally known the trouble will be over. It is only another case of the "not true" of one's earlier opponents and the "not new" of one's later enemies, which even Mr. Prior's good-tempered fairness has failed to avoid.

Wholly aside from Amiens it is an almost unknown occurrence to my knowledge that "the vertical leans of pillars follow the backward slope of the wall." This is an independent discovery which ought to be verified. The two individual instances in the cloister of S. Ambrogio at Milan and in the church of Notre-Dame at Chalons may be fairly thus described, but no other similar instances were illustrated in the debated exhibition,

[1] Not quite correct! The vertical curves are thought to be connected with the mediæval entasis, and the mediæval entasis is held to be what it undoubtedly is, a survival of the classic. The horse-shoe divergence in straight lines is found as an independent phenomenon, as well as with the curves.

[2] This demonstration was offered for the interior transept angles in St. Mark's, and for the Court of S. Ambrogio at Milan.

[3] *Architectural Record*, November, 1904; and "Memoirs of Art and Archæology of the Brooklyn Museum," No. IV. (Macmillan).

[4] "Dictionary of Architecture," published by the Macmillan Company, 1901, edited by Dr. Russell Sturgis.

and no others are known to me. The significance of these instances lies in their relation to the naves of the churches with which they are connected and in which the same system of widening (or horse-shoe form of construction) occurs, without any batter whatever. In S. Ambrogio at Milan, especially, the piers of the nave lean outward, from the pavement up, with a total divergence of one foot, under conditions which are impregnable as regards thrust, and without batter. On the other hand, to claim that the entasis in the pilasters of the cloister of S. Ambrogio or on the aisle wall of Notre-Dame at Chalons has any other explanation than that these pilasters are palpably derived from classic forms (in proportions and capitals as well as entasis) is an unreasonable scepticism. In Italy, at least, mediæval columnar forms with entasis, both engaged and free-standing, are so easily instanced that scepticism on this head merely gives one confidence that some modern critics have still something to learn, and perhaps in more than one direction. Having devoted to this subject an entire article in the *Architectural Record*, which is quoted in the bibliography of the Edinburgh Catalogue, it is unnecessary to waste more space on it here.[5]

Where the widening effect is obtained in side aisles by the outward lean of the responds facing the transverse walls of chapels which adjoin these aisles, the construction may properly be described as a batter, but to give it this name does not alter the fact that is the means of obtaining a widening effect which is elsewhere obtained by construction without batter. The facts have to be covered by an explanation which applies to all the phenomena. In S. Mary Diaconissa, at Constantinople (where there are no vertical curves), the phenomena, from the pavement up, are produced by a battering construction, but this only verifies the contention that the phenomena are constructive.

The battering in this church, as in St. Mark's, is such as to produce vertical bends which have the effect of curves. Utilitarian battering in the form of bends is an unknown construction.

In the upper walls of the nave of St. Mark's the term applies; but, if so, it again verifies the contention that the vertical bends are constructive. The supporting piers have no batter, but their divergence has also been measured and published. The crucial fact in St. Mark's is that there is a total divergence of not less than 33 in. throughout the nave, as between the bases of opposite piers and the springing of the transverse arches. If this divergence were due to thrust or movement it would have involved fissures in all the domes of more than eight feet in the lower circumference of each dome, because the circumference of the dome is three times its diameter. It is certain that such enormous fissures have never existed, to say nothing of the fact that an accidental divergence of 33 in. would involve the downfall of the vaultings. To concede that the divergence is partly obtained by constructive battering is to concede the whole contention for St. Mark's.[6]

Finally, if the exterior main door of St. Mark's be examined it will be found to have the same horse-shoe bend which is here produced by the constructive setting of the engaged columns. These are not exposed to thrust, and are leaned against walls which have no batter. Altogether, if it were not for Mr. Prior's high reputation, his choice of a term which does not cover the facts would not even require mention, and it is quite certain that his suggestion that the mediæval vertical bends and curves are a form of utilitarian batter can never be seriously considered.

There are also evidences of haste in his examination of the exhibits for St. Mark's. For instance, he says: "The setting back of pillars on an upper storey behind the line below, as at St. Mark's, is also a mason's expedient to prevent the edges of his strings being flushed off. But such possibilities do not enter into Mr. Goodyear's argument for his refinements." If this reviewer will again examine my published photographs or my published measurements he will find that the stepping back of two inches in St. Mark's is confined to the south side of the nave. It does not hold on the north side, and is consequently immaterial from any point of view. If he examines my publications he will find it quoted simply as a matter of record, and I have not mentioned any other instance of such setting back in any other church.

There is mention under this same heading in the review of a number of photographs which show the stilting of arches, and this is held to be a constructive expedient. Of course I have never suggested the contrary. All photographs published or quoted in this connection bear on divergences, horse-shoe bends, and vertical curves below the capitals, whereas the term "stilting"

[5] *Architectural Record*, vol. vii, No. 1, 1897.

[6] The arch of the Apocalypse, twice published in the ARCHITECTURAL REVIEW, does not support the adjacent dome, and the vaulting arches which support the latter are not depressed. The best photograph of the depression of the Apocalypse arch is that made from the choir, because this shows that the vaultings which support the adjacent dome are not depressed at the crown. Such a photograph was made by me in the summer of 1905, and exhibited as an enlargement at Edinburgh. Manfredi's photograph, as published in THE ARCHITECTURAL REVIEW, does not show at all clearly the separation between these two vaultings which abut one another, but close inspection of the photograph still shows how the vaulting on the near side of the first dome rises with undepressed crown above that of the Apocalypse arch.

applies only to the arch above the supporting capital.

Mr. Prior's general remarks under his "Class II.—*Settlement*," must meet the approval of all experts in construction, but in considering the application of these remarks to my observations he not only forgets to bow "to the authority of those who have seen," but he raises objections so easily answered that one can only be grateful for the opportunity to set him right.

For the vertical curves at Vicenza I am quoted as follows: "He remarks that the side walls of the chapels abut the transverse vault arches, and that therefore no outward thrust was possible. This, of course, is true if the said walls were built before the vaulting, but if between the chapels they were of a subsequent building by even six months later than the vaults, the elimination of thrust is not so clearly demonstrated. The catalogue does not clear up this particular point." The catalogue does not; for the simple reason that a vaulting can never be put up in advance of the original buttressing construction, which in this instance wholly consists of the aforesaid chapel walls and is confined to them. I am glad to be able to supplement the catalogue in this particular by citation of the printed history of the church which is sold in the sacristy of the cathedral, and which specifies the precise year of the building of each chapel, and which specifies the precise decade of the subsequent construction of the vaulting. It is not often that accounts are so specific, but I must say that they do not appear to be at all needed in this instance. The vaulting is of so great a span and of such relatively low height and crown that an aisle construction with flying buttresses could not be imagined as ever having been contemplated in this church, even if there were no records. Moreover the Italian Gothic is well known not to affect that style of construction. Wholly aside from the records there is no church in Italy where the relation of resistance to thrust has more clearly been planned in advance for the given conditions.

Another passage under "Class II.—*Settlement*" reads as follows: "In the faces of such churches as St. Mark's, or the Duomo of Pisa, cased with marble upon a core of rubble, we would not be likely now to see the dislocations that took place in the original core of the walls. I cannot, however, find that Mr. Goodyear meets this point against him by telling us distinctly that the marble casing in these cases was part of the first construction. He certainly gives us the certificates of architects, but they are far from conclusive on this particular point." To this we answer that these certificates are neither lawyers' briefs nor architectural arguments. They are statements by engineers who were thoroughly familiar with the given buildings, and as little disposed as myself to overlook elementary considerations. The casing of St. Mark's only rises to the height of the galleries. The problem of the curves in elevation begins at the gallery parapets. The high antiquity of the casing is undoubted, but the levels taken in the galleries offer an independent demonstration. The certificate says that "the occurrence is too uniform to be considered as merely accidental." I am not aware that Commendatore Saccardo, who gave the certificate, laid any stress on the casing. The levels were taken after he wrote the certificate.

The problem of the horse-shoe construction in St. Mark's is not affected by the casing below the galleries, and above the galleries there is no casing. Both parties to the argument are agreed as to facts of inclination and divergence. (If the walls of St. Mark's are battered the argument ends.) The reviewer has himself also quoted as conclusive the measurements in the transept angles of St. Mark's, as follows: "He is able to show that in many of his instances the idea of the lean having occurred through thrust is not tenable, for it is to be seen at the internal angles where thrust would not be felt." I have already pointed out that the advocates of thrust in the upper nave of St. Mark's must admit that fissures occurred, and have been repaired, in the circumference of each dome, to the amount of over 8 ft. in every dome; to say nothing of the question whether vaultings can spread 33 in. without totally collapsing.

We come then to the question of casing as affecting the Pisa Cathedral. Here again Mr. Prior's knowledge of the building is at fault. The thin slab casing of St. Mark's was undoubtedly applied to walls which were an independent construction and able to stand without it, but the marble blocks at Pisa are solid masonry belonging to the body of the wall, which could not have been built without them. They are not thin overlay like the casing of St. Mark's or the Florence Cathedral. Moreover no one who has ever carefully examined my measurements for Pisa could suppose that there are any problems connected with the core of the walls as distinct from the surface. Whatever happened to the core of the walls the problem is to explain the visible masonry as affected by accident, and that no one has ever succeeded in doing. More than that, no one has ever attempted it. If it were attempted it would require an analysis and quotation of measurements as careful and as comprehensive as those which I have published, before the question could even be debated.

Baron Henry de Geymüller, the architectural editor of Burckhardt's *Cicerone*, wrote me in 1903 to express his acquiescence in the demonstration

offered by my measurements of the walls at Pisa as to the constructive facts.[7] This letter was written without knowledge of the certificate of the architect in charge, which appeared in a later publication than the one which Baron de Geymüller had consulted.

The remarkable features shown by the levels of the great exterior string-course at Pisa are undebatable as constructive facts. It would be most amusing were anyone to suggest the contrary. Even hypothetical explanations outside of my own have never been offered, and the facts were notoriously unknown, and could not be known, until the levels were taken.

Under "Class II.—*Settlement*" we find again the following passage: "When Mr. Goodyear says any movement in vaults at Amiens or in walls at Notre-Dame has been impossible because no cracks show, we can accept his conclusion as final only if we accept his philosophy altogether." Here again Mr. Prior has not understood the proposition, and no passage from the Edinburgh Catalogue, or otherwise, can be quoted to verify the alleged statement on my part. I have nowhere said that no cracks show at Amiens. That is not the question, although I believe it to be true, as a matter of fact, for the nave vaulting. I have said that the total divergence throughout the whole length of the nave is 34 in. when the width between piers at the capitals is compared with the width at the bases. I have said that the vault has not settled at the crown, and have taken photographs at a high elevation which establish this assertion. I have also said that the vault would have fallen if the clerestory walls had gone apart 34 in. by accident. However, if Mr. Prior holds that the triforium walls were battered at Amiens and that the piers curve out to follow this batter as already noted from his text, it does not appear why he should discredit his own hypothesis by ascribing to me statements about fissures in the nave vaulting at Amiens which I have never made, and for which no reference to publication can be given.

My position in the matter of cracks in the walls of Notre-Dame is not clearly presented by Mr. Prior, but in order to explain this I must tell a little more of the story than he does. The tower piers of Notre-Dame lean west, respectively 16 in. and 12 in. in a height of 80 ft., and the existence of these leans appears to be quite unknown to the experts of Paris. (I have suggested that this is a device tending to constructive stability and intended to forestall that thrust against the thin vaulting of the nave which the great weight of the towers would tend to produce.) The interior masonry of the first three bays of the clerestory walls is laid in courses which are normal to the lean, and slope down to meet it at a right angle, and this proves that if a settlement took place it began where the slope of these courses (away from the tower piers) is arrested, viz., between the third and fourth bays. At this point on the north side there must consequently have been a fissure of 16 in. at the top of the clerestory wall on the theory of settlement. Now what I have said is this: that there are no signs at this point of the repair of a fissure of 16 in. or of any fissure whatever, and I have exhibited detail photographs of large dimensions which show the cutting of every individual block in a long series of wedge-shaped blocks by which the sloping masonry courses are brought to a horizontal. Similar demonstration has been offered for the non-existent fissure of 12 in. on the south wall.[8] Therefore Mr. Goodyear does not exactly say that "any movement in walls at Notre-Dame has been impossible because no cracks show." He said that for a given point where cracks (of 16 in.) or the traces of their repairs ought to show, he exhibits large photographs of walls and their masonry courses on both sides of the church for a space of three bays, and that a constructive arrangement of masonry courses normal to the lean of the tower piers is shown by the cutting of the blocks of masonry which are all individually seen in these photographs.

In the matter of mediæval horizontal curves in plan, hasty examination of exhibits, hasty reading of the Catalogue, and oversight of several other publications are apparent in the remark about the cloisters at Verona and Bologna. Mr. Prior says, still under his "Class II.—*Settlement*": "I have found curves similar to those of the cloister at Bologna in a whole series of backyards in London." Now, if these backyards show curves beginning at the foundations, and all convex to the centre of the court, and on all four sides of the court, the remark is pertinent, otherwise it is the contrary. As Mr. Prior would say, this fact about the backyards in London should be clearly stated. In default of photographs it almost needs a certificate. The contention for Bologna is that curves due to careless construction would not all be convex to the centre of the court, and that

[7] As published in the *Architectural Record*, Vol. VII., No. 3, for 1898. I have given a careful account of the modern repairs of the walls at Pisa in this article, which is quoted in the bibliography of the Edinburgh Catalogue.

[8] This construction is again related to that of the gallery bends in elevation for which other explanations may probably be invoked, as considered in detail in my publications. The photographs showing the masonry cutting of every block in the wall at the given point have been published in the *Architectural Record* for December, 1904. As the topic of the gallery bends in elevation is not debated by Mr. Prior I will also pass it by.

curves due to thrust would not begin at the foundations. Mr. Prior continues: "For example, as to the cloister walls at Bologna and Verona, which have an outward curve in plan—such as has an extraordinary resemblance to that produced by thrust, for they are on upper storeys—he remarks that there were no vaults to produce such a thrust. But wood ceilings and roofs, as well as vaults, can push out walls in this fashion, and we are not told that there are neither floors nor roofs."

Now the photographs and published descriptions show that *there is no upper storey* in the cloister at Verona, and that the curves begin at the earth's surface and at the foundations of the parapets. The absence of an upper storey also appears in the Catalogue illustration. The Catalogue description for Bologna says "the curves are uniform on all sides of the court *and they begin at the foundations.*" Attention to such details is very necessary in the examination and discussion of the evidence offered at Edinburgh, and it may be that the Scotch architects, who had a better opportunity than Mr. Prior to examine these details, may have reached a different verdict for that reason.

We come now to Class IV.—"*Misfittings of work where alteration or stoppage of building has occurred.*"

Aside from the cloisters just mentioned Mr. Prior's article omits mention or discussion of any curves in plan excepting the return curves (elongated S shape, or "Hogarth's line of beauty") at Fiesole. He explains these by his own theory of the origin of the deflected choirs of northern Europe, but he has the good sense to add, "Until I have been to Fiesole, Troja, etc., and seen for myself, my conjectures lack substance."[9]

Thus abandoning the problems offered by perspective illusions and the vertical curves, bends, and widening of horse-shoe form in construction, we will take up Mr. Prior's argument on the subject of deflected plans, but it will be noticed that we have reached this topic by way of his somewhat hasty and confessedly inexpert treatment of the problem of curves in plan, and our reason for following this course will presently appear.

It is Mr. Prior's opinion that the bends and deflections of plan in northern cathedrals are partly due to the frequent stoppages of work, often for long periods of time, and partly due to the habit of treating the choir, or portions of the nave, as a temporarily finished building, walled or screened off from the uncompleted parts of the nave. In such instances a careless orientation of the façade or the difficulty of sighting from the finished to the unfinished portions of the church are presumed to account for such deflections.

It is now our first effort to point out that the leading authority of all modern time on French Gothic may be presumed to have had some knowledge of the conditions described by Mr. Prior. That authority was Viollet-le-Duc. In his famous Dictionary we find the following passage on the asymmetric plan of the cathedral of St. Denis:—

"These refinements (*délicatesses*) appear strange to us nowadays, and rather than search out their meaning or verify the resulting effects we prefer to attribute 'these defects of planning' to the ignorance of these ancient artists, in spite of the fact that we are ready to marvel next day at no less important irregularities as noticed in the monuments of Greek antiquity, irregularities which are the result of optical considerations (*besoin de l'œil*) and of a very delicate appreciation of perspective effects."[10]

In face of this quotation Mr. Prior will probably admit that his explanations did not apply to all northern plans in the opinion of Viollet-le-Duc, and as he is ready to admit his incompetent knowledge of the Italian plans it would appear that the debate on this particular subject might close with the suggestion that Mr. Goodyear's "gospel" in this particular was not "foolishness" to Viollet-le-Duc. Has Mr. Prior possibly overlooked the above passage in the Dictionary, which he frequently quotes in his own works?

Viollet-le-Duc continues: "Such a method required, it is true, a very complete practice in geometry, not only on the part of the master-mason but also on the part of the workman—but it will probably not be suggested that a knowledge which was pushed so far by the master and so easily understood by his assistants has ever been an indication of ignorance or of barbarism."[11]

In the continuation of this reply to Mr. Prior's review I shall give careful consideration to his views on northern mediæval plans, and shall explain my own observations as to certain mediæval plans in Italy. WM. H. GOODYEAR.

(To be continued.)

[9] There are no curves in plan or otherwise at Troja.

[10] "Ces délicatesses nous paraissent étranges aujourd'hui, et plutôt que d'en chercher le sens ou d'en constater les résultats nous préférons mettre ces *défauts de plantation* sur le comte de l'ignorance de ces artistes anciens, quitte à nous émerveiller demain devant des irrégularités non moins importantes signaleés sur des monuments de l'antiquité grecque; irregularités qui sont le résultat d'un besoin de l'œil et d'une très-délicate appréciation des effets perspectifs."—*Dictionnaire* IX. p. 203.

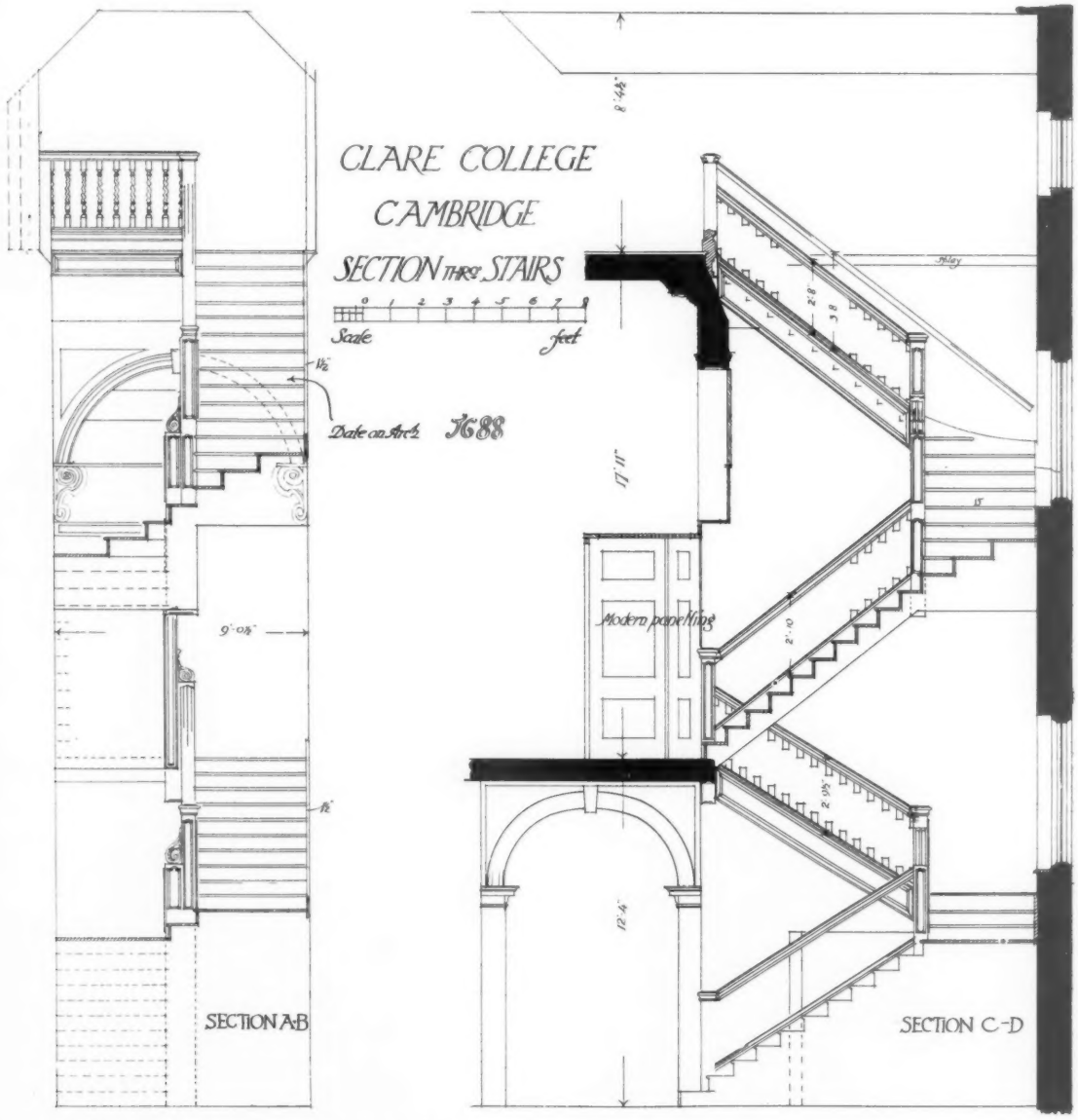
[11] "Une méthode pareille exigeait, il est vrai, une pratique très-complète de la géométrie, non-seulement de la part du maître, mais aussi chez les metteurs en œuvre; . . . mais on ne prétendra pas, probablement, que ces connaissances, poussées très loin chez le maître et facilement comprises par les aides, aient jamais été une marque d'ignorance ou de barbarie."—*Dictionnaire* IX. p. 204.

The Practical Exemplar of Architecture.

V.—Staircases.

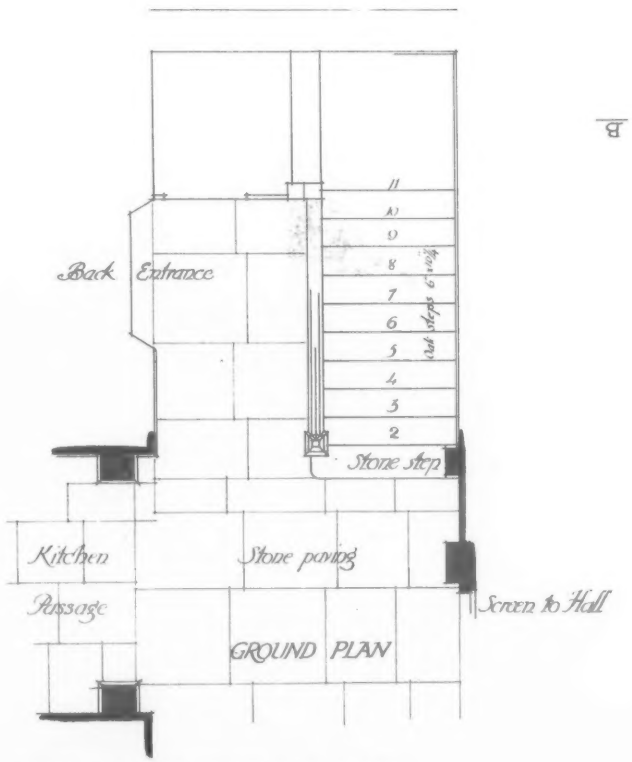
THE staircase at Clare College was probably designed as the staircase to the library. It now leads to the combination room, which opens into the library. It has similar details to the screen in the dining-hall, from the gallery of which it is cut off by a modern panelled screen. The newel between the first and second floors is the finest example, but, unlike the one illustrated, is built up of two pieces; it was, however, impossible to obtain a good photograph of it.

Whitton Park, Staines, is one of those numerous interesting houses in the suburbs of London now fast disappearing. A hundred years since the residence of a wealthy man, it has gone through various vicissitudes, including that of a golf club-house, to be eventually ground into mortar by the relentless jerry-builder. A scheme is on foot to convert it and the grounds, if possible, into a public park and museum.



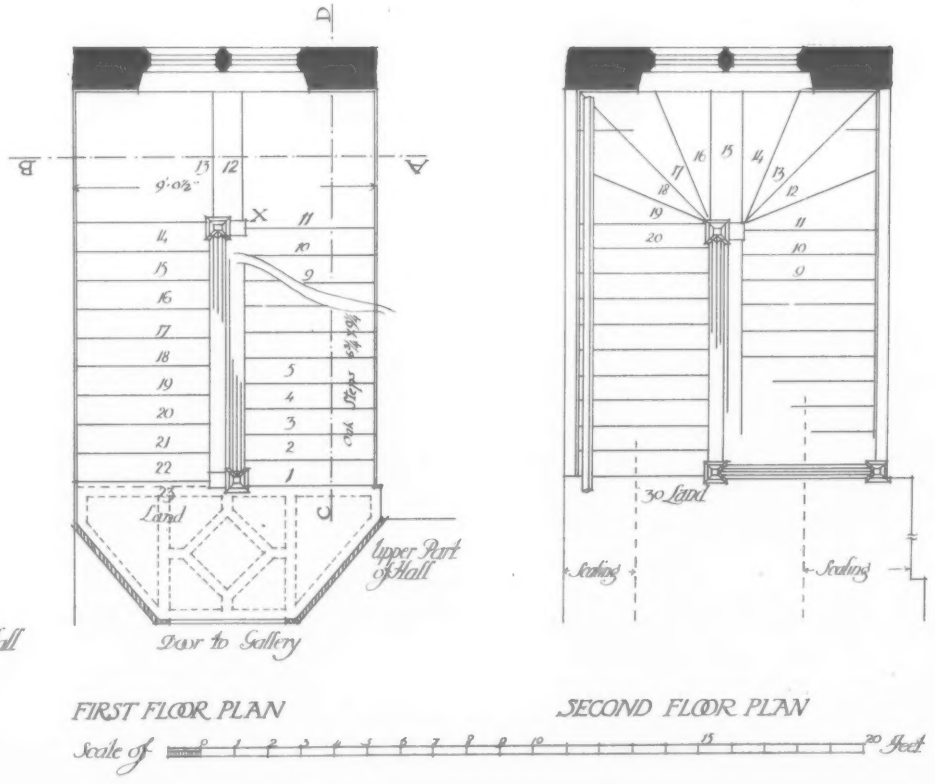
MEASURED AND DRAWN BY G. H. PARRY.

CLARE COLLEGE CAMBRIDGE



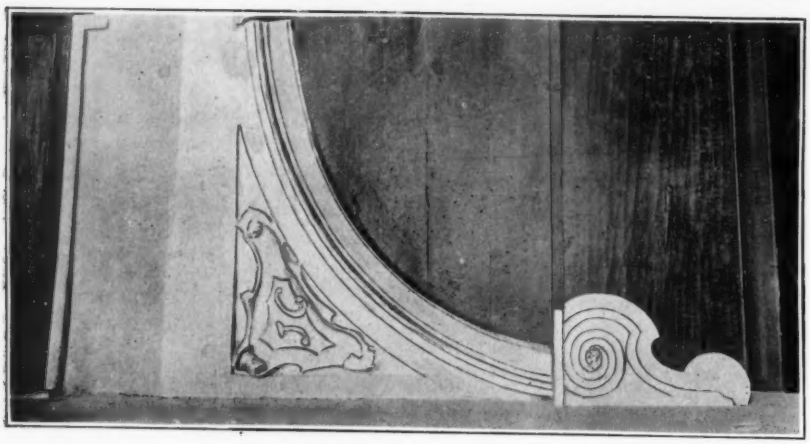
MEASURED AND DRAWN BY G. H PARRY.

PLAN OF STAIRS TO LIBRARY

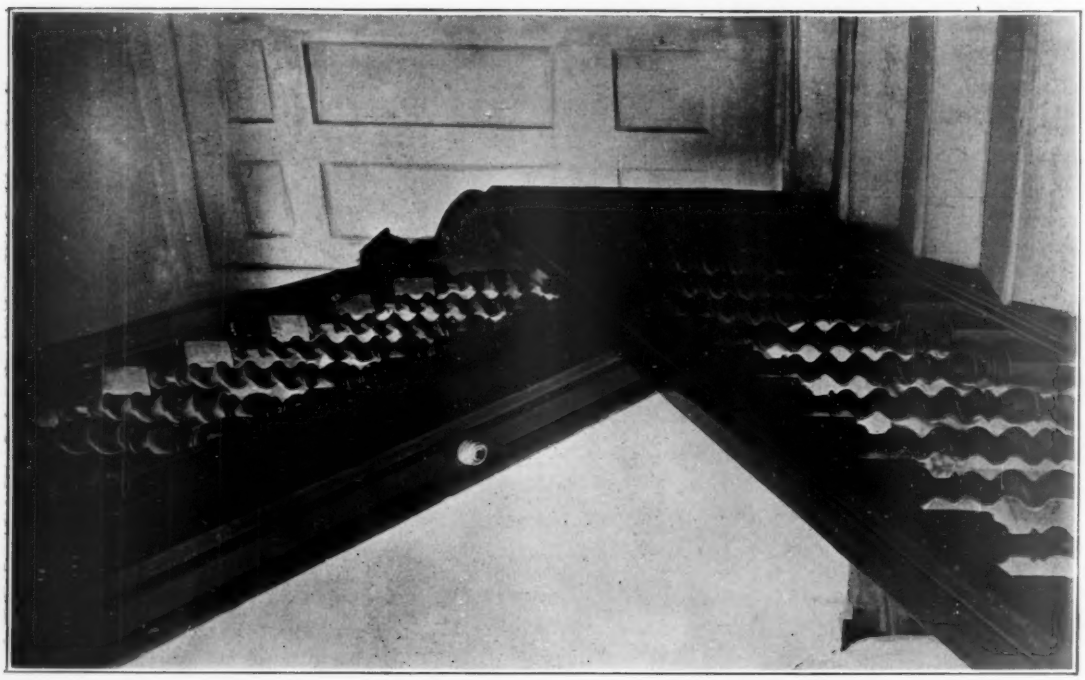


Photos: G. H. Parry.

Newel post.

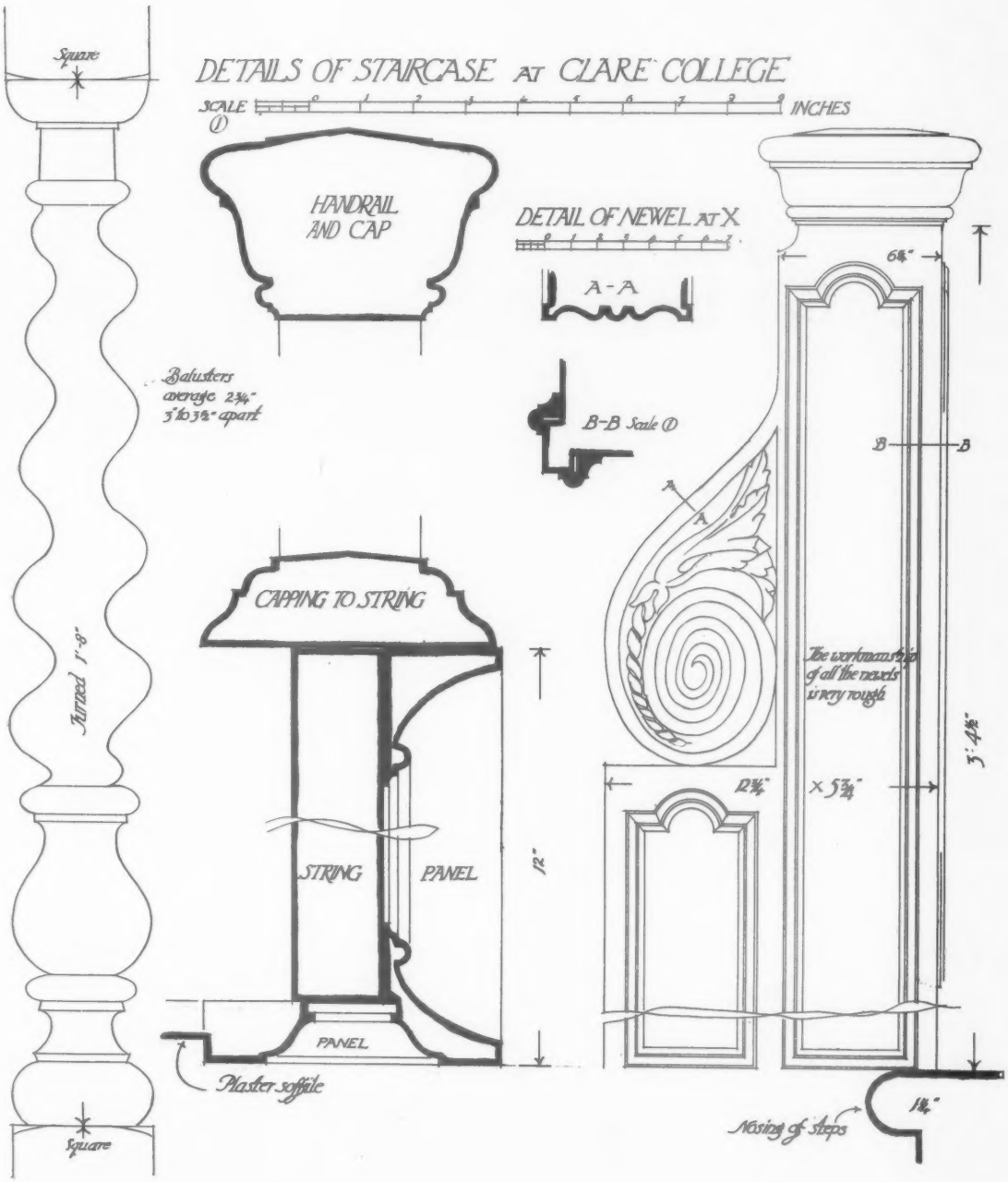


Arch over between first and second floors.

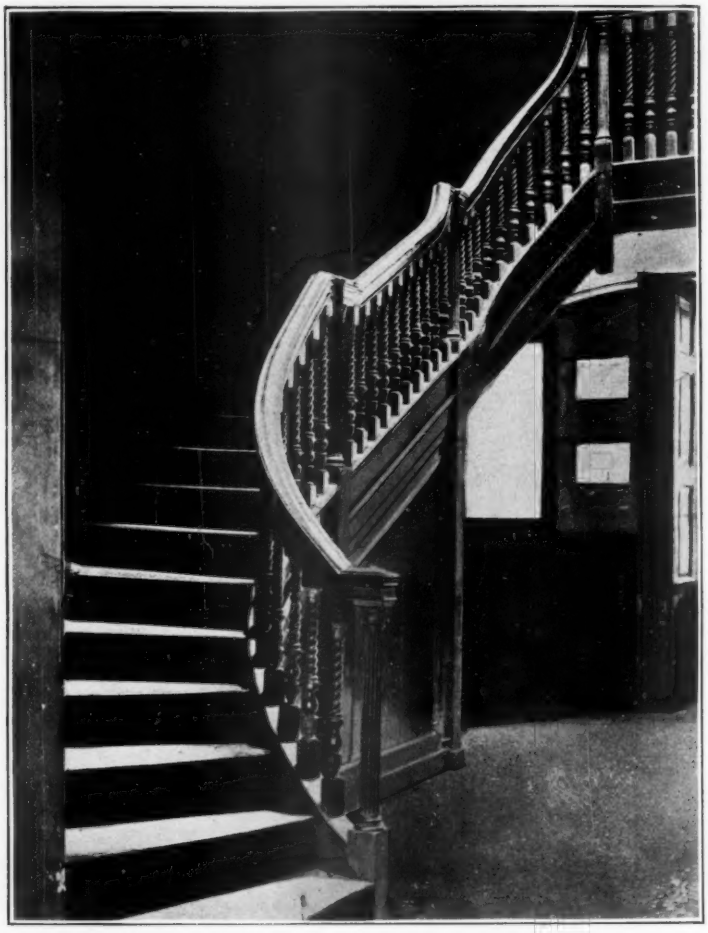


General view.

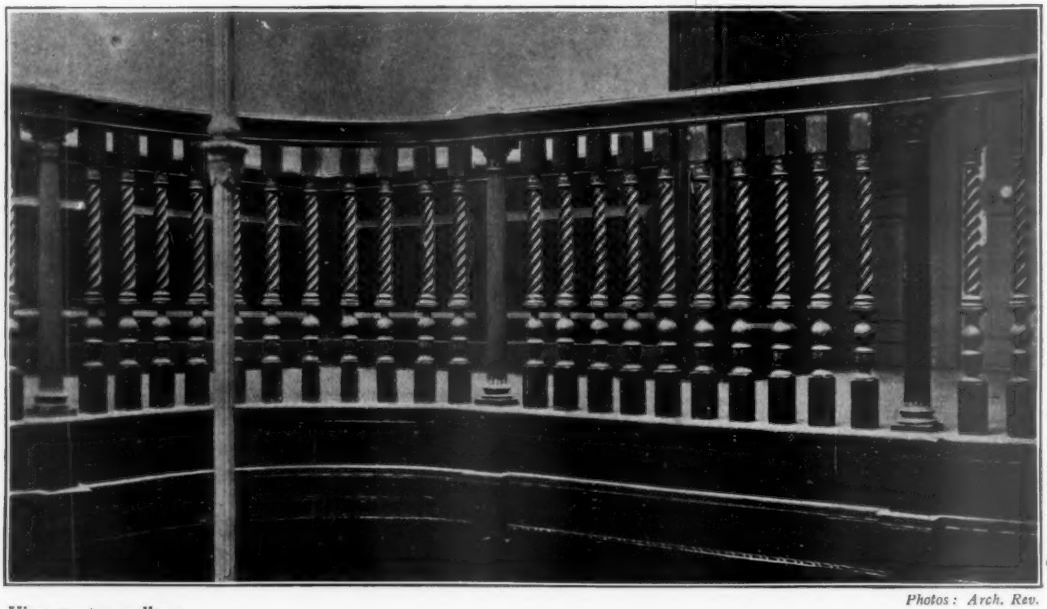
STAIRCASE AT CLARE COLLEGE, CAMBRIDGE.



MEASURED AND DRAWN BY G. H. PARRY.



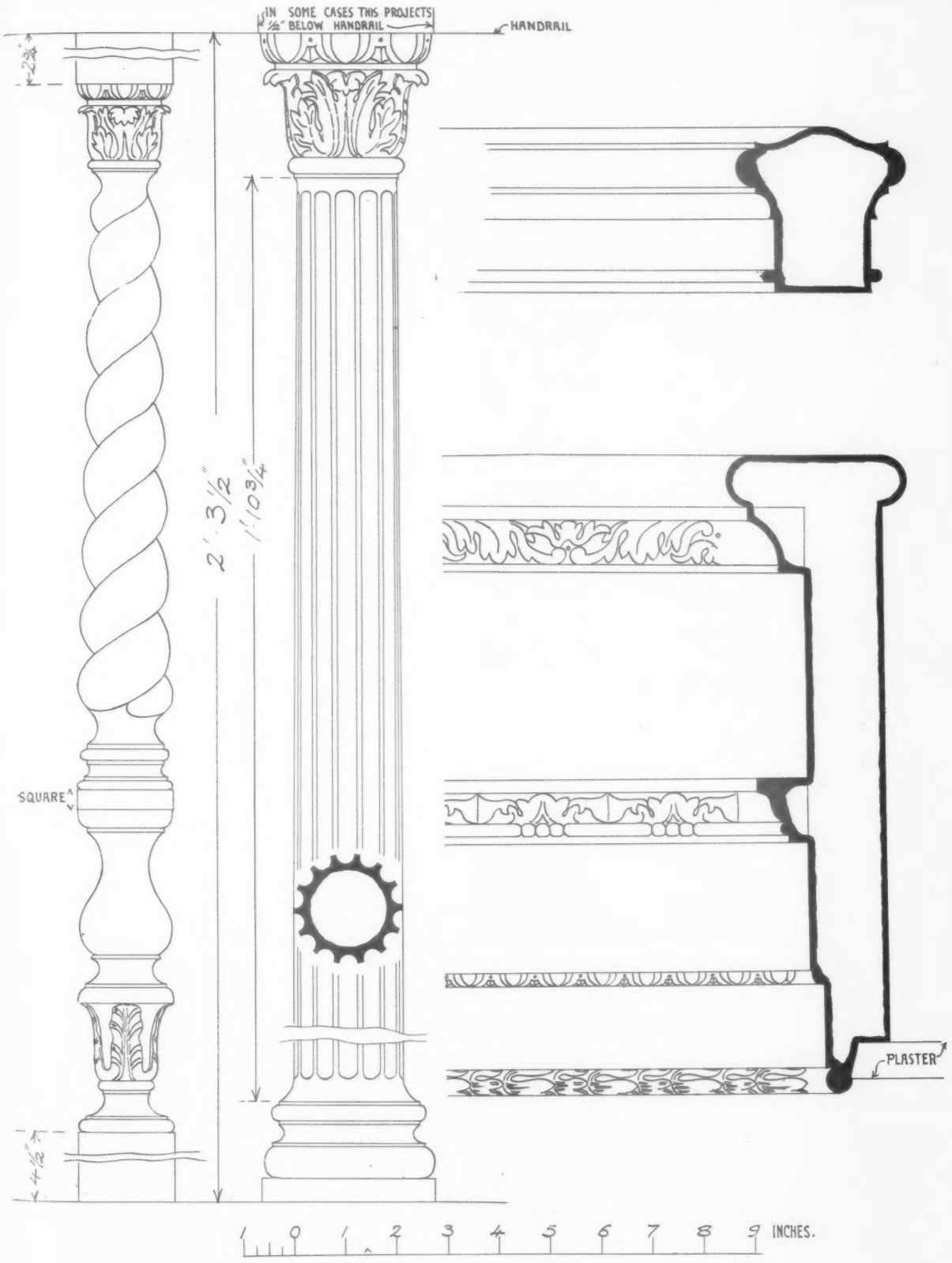
General view from ground floor.



Photos: Arch. Rev.

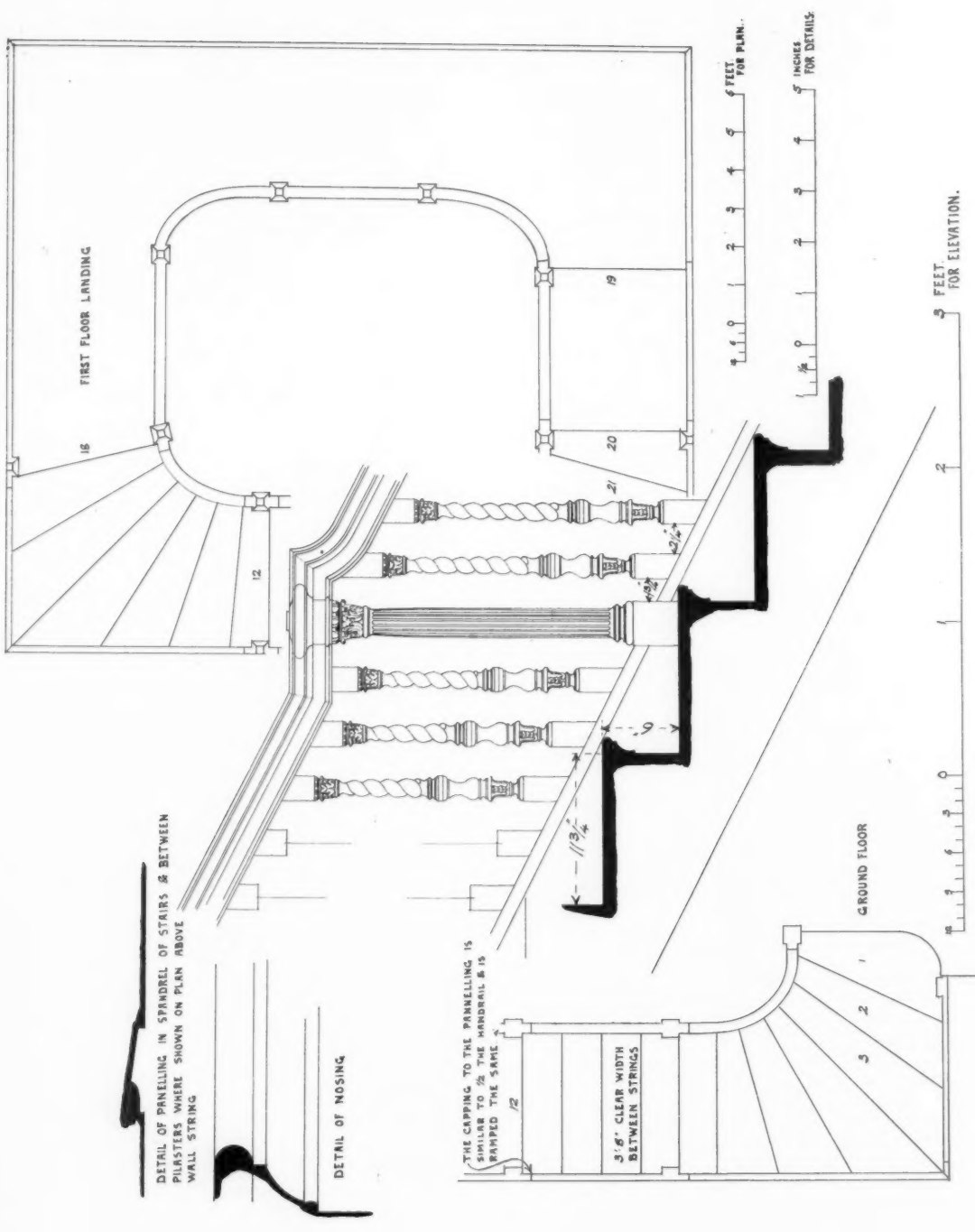
View on top gallery.

STAIRCASE, WHITTON PARK, HOUNSLOW.



STAIRCASE, WHITTON PARK, HOUNSLOW.

MEASURED AND DRAWN BY FRANCIS BACON, JUNR.


FIRST FLOOR LANDING
18
19
20
21
12
6 FEET FOR PLAN.
6 INCHES FOR DETAILS.
3 FEET FOR ELEVATION.
GROUND FLOOR
3'6" CLEAR WIDTH BETWEEN STRINGS
THE CAPPING TO THE PANNELLING IS SIMILAR TO ½ THE HANDRAIL & IS RAMPED THE SAME
DETAIL OF PANELLING IN SPANDREL OF STAIRS & BETWEEN PILASTERS WHERE SHOWN ON PLAN ABOVE WALL STRING
DETAIL OF NOSING

STAIRCASE, WHITTON PARK, HOUNSLOW. DETAILS.
MEASURED AND DRAWN BY FRANCIS BACON, JUNR.

The Milan Exhibition.—III.

The Exhibits in the Decorative Art Sections.—*Conclusion.*

"FIRE has destroyed the most delicate portion of the great exhibition. Our dainty laces and ethereal embroideries, our furniture and pellucid things of glass; our iridescent pottery: all these, all the filmy creations of the weaver's loom, all that is by nature fragile of human craftsmanship, has perished in a single night, reduced to ashes and nothingness. It is unjust that the flames should choose to struggle with these poor, beautiful things; they found them docile, prepared to die at the first scorching breath. All who have seen and cared for them will love them more, because their beauty lay in their frailness; and because they were beautiful they have perished. There was a something of woman bound up in their charm. The other exhibits grow virile, powerful, and rough things by comparison. Perhaps the fire knew, and chose."

Only an Italian journalist could rise to such heights of poetry in describing the great disaster which has overtaken the Exhibition at Milan. But he could not hope to describe the feelings of a "Special Correspondent," who in the middle of preparing his notes for publication wakes up on a fine morning to see his work literally crumbled to ashes. The Italian Art Section, which on August 2 last was the admiration of many, was on the following morning a blackened patch of ground over which excited officials scrambled; the optimists talking of reconstruction and the pessimists gloomily arguing that the vacant plot ought to be planted with flowers and shrubs.

It seems as though the world refuses to learn by experience. The terrible destruction of the Chicago World's Exposition by fire in 1893 must have been fresh in the minds of the committee, and Italy has herself suffered similar losses, both at Genoa in the same year and at Como in 1899, when many valuable records of Volta perished, In the last article we remarked that a valuable lesson might be learnt from Italy in the methods adopted for the preservation of ancient monuments: but of a truth we are compelled to add as a corollary that Italy may learn something from us as to the protection of modern buildings! The total force of the Fire Brigade was on the spot as soon as possible, and we note that the number of steamers was four. This is not a lavish provision for a city containing more than 380,000 inhabitants. From the details to hand it appears that great faith was placed in the efficiency of the grenades; and yet it happened that the fire was out of hand

Photo: A. Croce.

THE FIRE AT THE MILAN EXHIBITION.
ENTRANCE TO THE FINE ARTS BUILDING ON THE RIGHT.

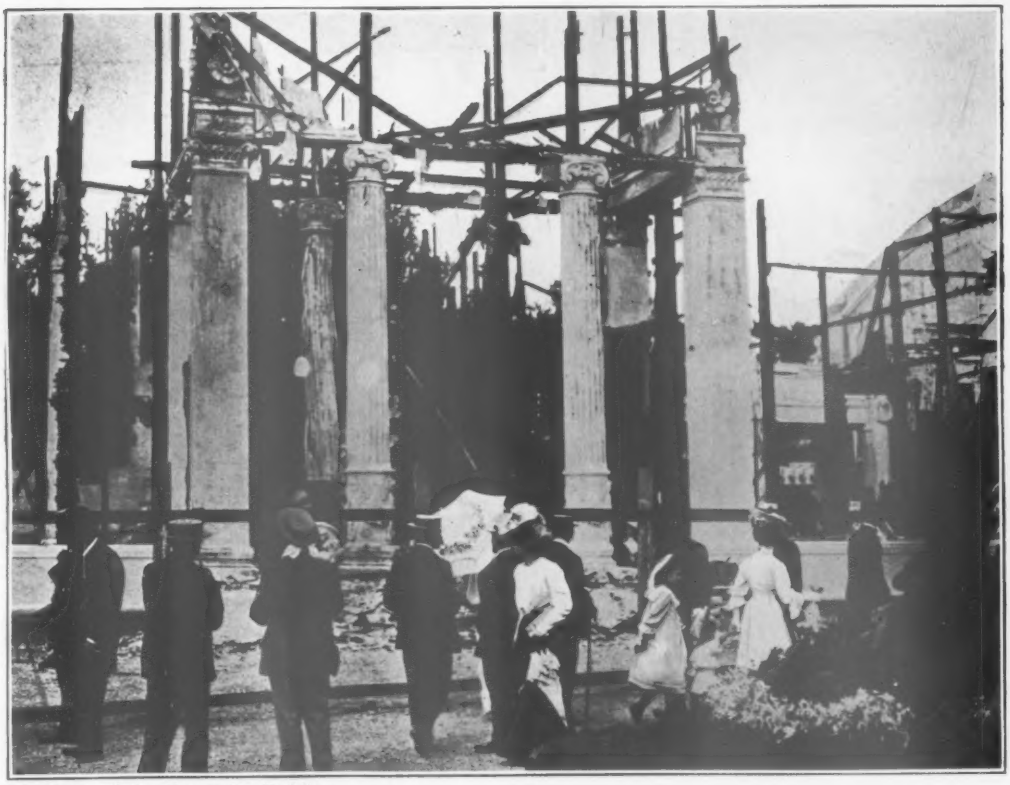
before it was discovered, and that those who did subsequently contrive to gain possession of these appliances could not approach close enough to employ them.

Leaving out of consideration for the moment the loss of many examples of modern art specially prepared for the Exhibition, and of which, as far as is possible under existing circumstances, it is the object of the present article to treat, the number of valuable records which have been swept away by the conflagration is very large indeed. It will be remembered that in the architectural building were housed all the documents and models sent by the various district offices for the preservation of historic monuments, and now they are all destroyed. The photographs, perhaps, may be replaced without much difficulty, but it will be hard to reproduce the drawing of such works as the restoration of the Palazzo Ducale at Venice. Not only this, but many of the designs were for works waiting to be commenced until such time as the necessary funds should be forthcoming. The models of the Palazzo de Giustizia, by Calderini, at Rome, the Palazzo della Cassa di Risparmio at Pistoia, and the great model of the monument to Vittorio Emanuele II at Rome, which stood in a room by itself, and even at a scale of $\frac{1}{25}$ full size occupied over two hundred feet of floor space, have all vanished. Among the drawings destroyed are those relating to the reconstruction of the Campanile at Venice, and the proposals for the restoration of the vaults known as the "Apocalypse" and the "Paradise" in the Basilica of St. Mark. Those for the Library of Sansovino similarly are gone; and the scheme for the restoration of the Castello Sforzesco at Milan no longer exists. But most important of all, and such as to constitute the greatest loss, is the destruction of the exhibit of the Basilica del Duomo. "In it there were the schemes for the decoration of the vault of the greater nave in graffito, a full-size piece showing the new marble paving (copied from the older portions), one or two valuable fragments of painted glass, and above all the most important of the schemes for the new façade, from the two prepared by Brentino in 1887 and 1888 down to those drawn up by the Commission of the Fabric of the present day." This list does not include much that was of interest and archæological value. The signed contract drawing for the front, dating back to the sixteenth century, must be now no more than a cinder; and the marble pinnacle taken from the old work and set up as a model is but a handful of lime!

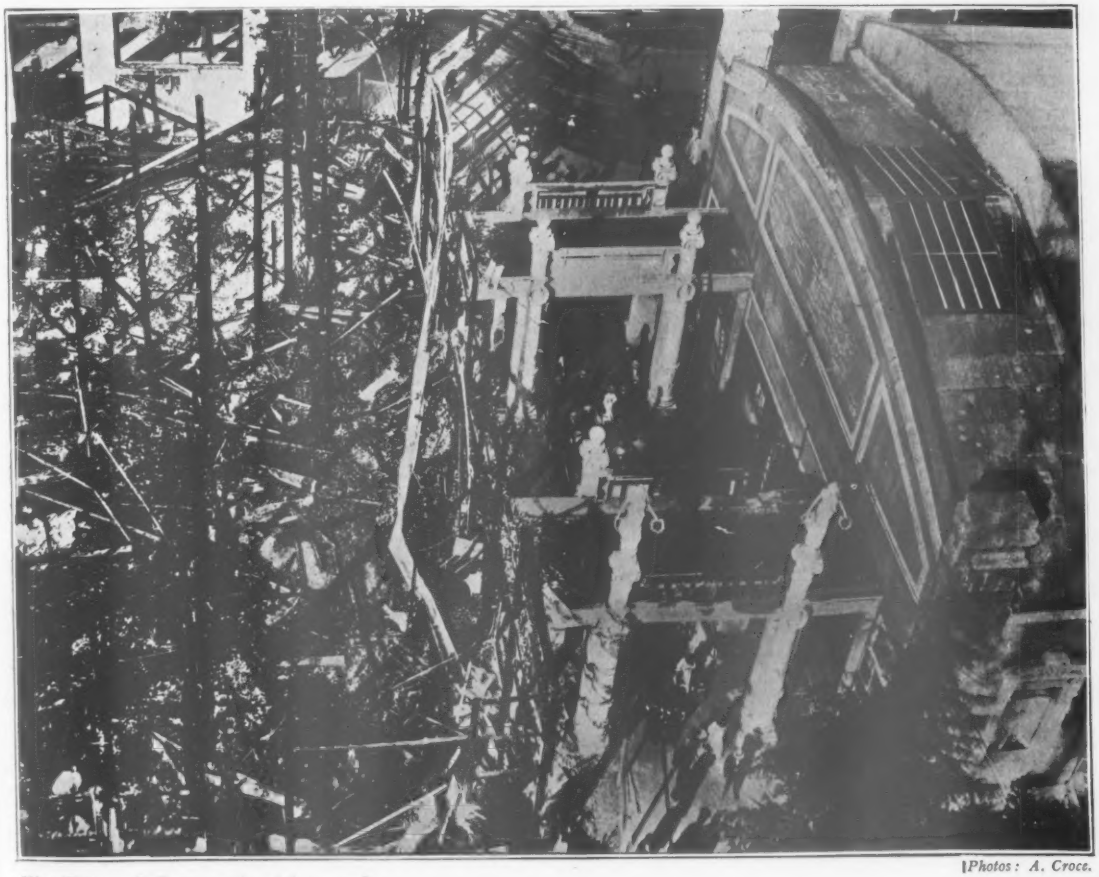
But enough has been said about the disaster which has snatched away the Italian Decorative Art building while there still remained very much to be done for the completion of this article, which, as fate has willed it, is chiefly concerned with what no longer exists. This article must now be *in memoriam*.

The futility of international exhibitions as arranged on the lines of those of recent days was never more fitly demonstrated than it is in the sections at Milan more closely concerning the work of the architect and craftsman. The architectural exhibit has ascended to the heavens in a pillar of fire; and all that spoke of the sudden expansion and development of the "stile moderno" in Italy has followed in its wake.

As the Exhibition included in its scheme abundant evidence of Italian progress in the new art, it was, perhaps, unreasonable to hope that there would be included with the Scuola di Prospettiva Scenografica—the only exhibit, by the way, which escaped the general destruction—some information as to the course of study through which an architect in Italy has to go before he can be considered qualified. If our memory serves us, the late Mr. Arthur Cates in his valuable series of papers on the training of architects in various countries did not deal with the system in vogue in Italy. We are therefore left in the dark as to the curriculum; and, like the trees in the parable, the architect must be judged by his fruits. All that we are—or, rather, were—allowed to gather was that a house is practically the joint work of two individuals, the first of whom prepares the plan and settles the constructional difficulties, while the second is he who clothes the skeleton with appropriate decorations. In fact Italy has had to face the same difficulty as we have, that of the overlapping of the two professions of architect and engineer. As a consequence the architect, understanding the whole mystery of construction and versed in the sacred rites of the styles, is unknown. Like England, Italy has the *architetto* and the *ingegnere;* but, taking the training of an English architect as a standard, to call him *architetto* is to call him something less than he actually is, implying that his knowledge of materials and construction is, at most, superficial; while to call him *ingegnere* is to endue him with powers of construction which he does not possess, and at the same time to deny him any claim to the artistic side. All branches of construction are held to concern the engineer, and the engineer alone; it is not enough that the would-be designer of houses is anxious to know his building construction and materials thoroughly well. He has to know all that our own engineers know, and a great deal more besides. On one board he may be scheming the water supply of a large town, and on another will have set out a harbour or floating dock. With all this he has little time to devote to struggling with the styles,



The Court of the Hungarian Building.



[*Photos: A. Croce.*

The Picture Gallery on the right, saved.

THE FIRE AT THE MILAN EXHIBITION.

so that there is plenty of room for his collaborateur, who, leaving alone the engineering course—or merely playing with it—devotes his whole attention to the study of architectural design. He does not confine his attention to architecture alone; you find him engaged in making designs for furniture, and even for stable fittings. The engineering course is fairly parallel with our own, but it would be a great pleasure if it were possible to say that our course of architectural design was as excellent as the Italian course.

The rock bottom of study for architectural design is the old battle cry of the Institute. "The first thing you must do is to learn to sketch; and the second thing is, learn to sketch; and the last thing you must do is, learn to sketch." And, though in the now vanished building there were no exhibits of students' work in Italy, the Hungarian sections were full of it.

It was in the really beautifully designed and decorated hall occupied by Hungary that the drawings were housed, and it contained a large number of mosaics, statues, and pieces of metalwork intended for buildings now in course of construction. The Industrial School of Design at Budapest, the National Hungarian School of Decorative Art, and the Normal School or Royal Hungarian Finishing School (Istituto di Perfezionamento) for professors of design, had all sent copious examples of their courses of study, and, as it were, have laid bare the very machinery by which Art Nouveau is produced.

The student begins with a light course of instruction in orthographic projection with shadings according to the rules of sciography; then he takes up a little building construction, and goes on to study architecture seriously. But not such architecture as suffices for us in our unambitious way. *His* architecture includes the wooden structures of Norway, the Temples of India and China, and the sun-dried brickwork of Yucatan. This seems to complete the preliminary course. He has then to wrestle with the consideration of ornament in relief, and he copies it in pencil, wash, half-tone, and black and white.

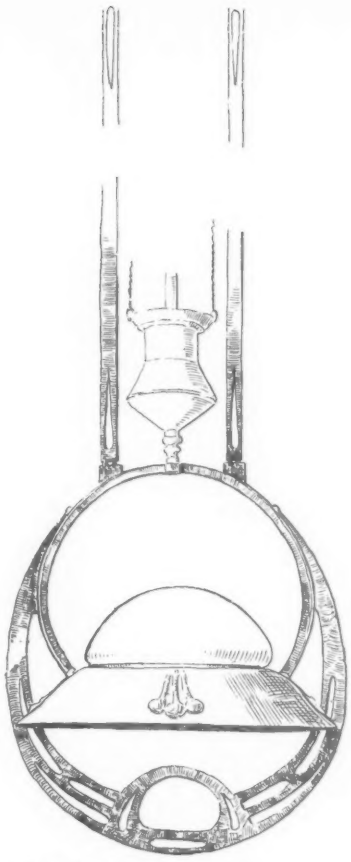
It would take too long, and serve to little purpose except as a record of so much work lost, to describe the whole course; but there is scarcely a thing capable of being drawn which is not made to yield its secrets to the student of ornamental design in Hungary. Greek vases, Persian carpets, and repeating patterns are attacked and mastered. Ironwork is studied in the forge and in the drawing office. The realm of nature is invaded and drawn in outline at first, then filled in and shaded: flowers, dead leaves, shells, beetles, animals, and butterflies in all their phases of movement (even portions of them drawn to a greatly magnified scale and beautifully finished in colours). Then, in what we take to be the final stage there is a course in which what has been learnt is put into practice. All that has previously been drawn with the utmost fidelity to nature is again drawn, but conventionally and decoratively. And it is scarcely necessary to add that a session in anatomy and in the "life" school forms an integral part of the curriculum.

The fruits of such good sowing are abundantly reaped in the advantages gained by modern art. To walk and make notes in the Hungarian galleries was an education in itself. Now it has gone; gone even before the official photographer had bestirred himself to make his negative, and so the copy which had been ordered for THE ARCHITECTURAL REVIEW for nearly a month will never appear in these columns.

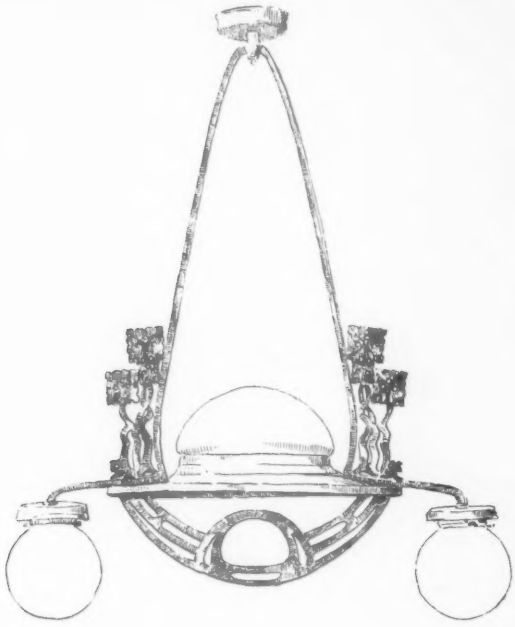
What we were permitted to gather before the catastrophe exclusively concerns metalwork. In this class the exhibits were peculiarly fine, and showed in a modified degree all the characteristics already noticed in the buildings. As a general rule the tendency is towards beauty of line for its own sake. In the work of the Italian artist-craftsman such lines need mean nothing; it is enough that the curves be graceful, and the designer is satisfied. In furniture small mouldings are bent into weird but graceful lines, and in the work of the goldsmiths and silversmiths the same effect is usually produced with inlays of enamel. In much of it one suspects too great a command of freehand drawing as the primary agent; it is as though the modern draughtsman were fascinated by his undoubted mastery over the whole world of form, as Bramante and his followers were by their command over the mysteries of perspective. But should the draughtsman elect to combine foliage or other natural objects with his curves he runs to one of two extremes. There is none of the staid and respectable conventionalism of old time in his work now. Either he adopts an exact and unartistic copy of the original for his stone, wood, or metal, or else it is more of a caricature than anything else that he produces. The Italian usually prefers the former. His horse-chestnut leaves, his vines—whatever it may be—are copied with relentless fidelity. Yet, when all that can be urged against his work has been said, it must be admitted that it hardly ever fails to please, and he has a rare knack for composition and "pattern."

And in considering the very few illustrations which accompany this article, it should be borne in mind that these are but the preliminary notes which were in course of amplification when an unkind destiny swept away the originals.

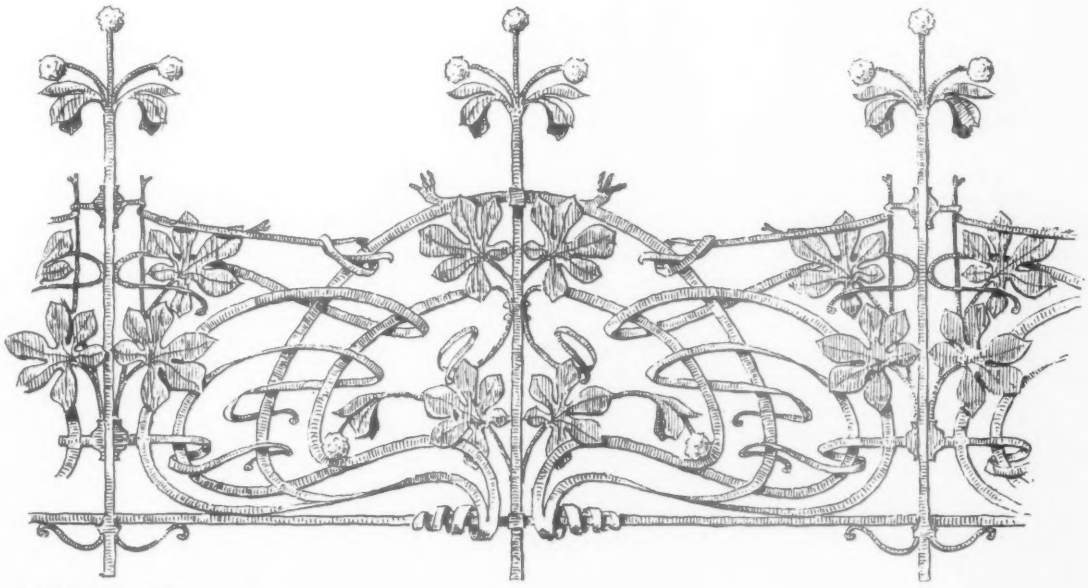
Most deeply is it to be regretted that the



Electrolier in polished copper.



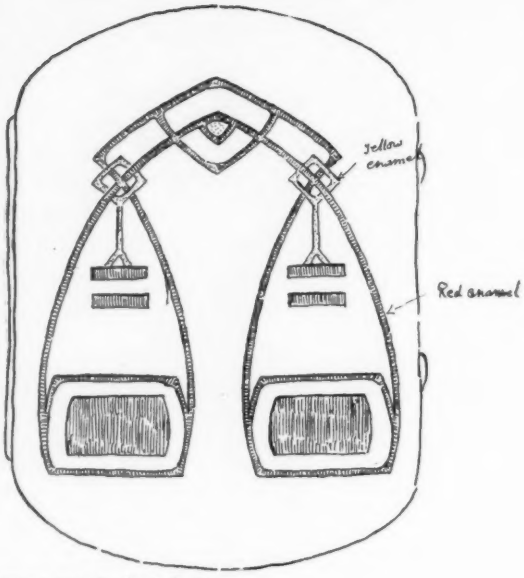
Polished copper and opal glass electrolier.



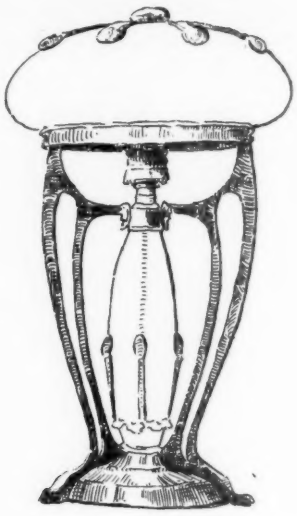
Wrought-iron railing.

METALWORK AT THE MILAN EXHIBITION.

SKETCHED BY ROBERT W. CARDEN.



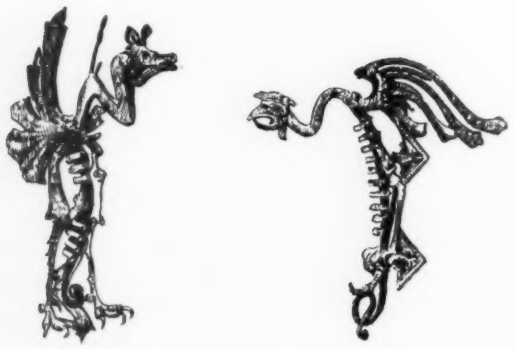
Cigar case in frosted silver.



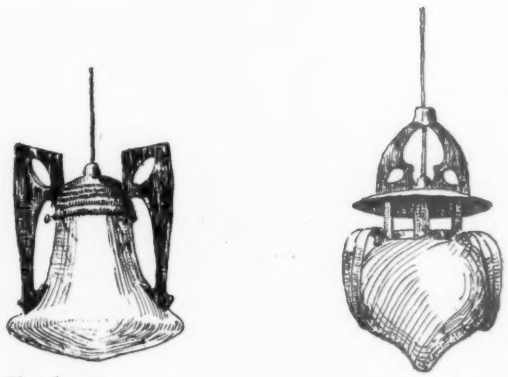
Standard electric lamp.

Wrought-iron gate.

Wrought-iron gate.



Two wall brackets for lamps in wrought-iron.



Glow lamps.

METALWORK AT THE MILAN EXHIBITION.
SKETCHED BY ROBERT W. CARDEN.

Hungarian bronzes disappeared before these notes were completed. It is just possible that some of them have escaped fusion; for even now, before the *débris* has been cleared away, a bronze horse still may be seen to stand amid the ruins ruefully surveying his less fortunate fellows.

To turn from what is being done in Italy in the crafts to the consideration of her progress in sanitary knowledge during the past few years is very nearly to make a rapid transition from the sublime to the ridiculous. It is not that Italy is not alive to the importance of the subject; it is that her sanitary engineers, with all the desire in the world to get the best possible, have very little knowledge of how to get it. From the exhibits it is evident that English fittings are recognised to be the best. This we gather from a careful examination, not only of their forms, but also from the names with which they are christened. You may see "Simplex," or "Sanitary," or a dozen other well-known names on closets, but they are made by native firms, and do not pretend to be anything else. The plumbing shown is beneath contempt, and they have more to learn in this branch than in any other. For them traps are only necessary under baths, and the overflow is connected on the drain side; lavatories join the nearest soil-pipe without the formality of a syphon. But what they cannot be made to understand is the purpose of an anti-syphonage pipe. In their simple sanitary creed a pipe is a thing which carries water from one place to another, "and no water goes down this auxiliary pipe which the English always insist on placing; therefore," says the *ingegnere sanitario* with a fine wave of his arms, "to place such a pipe is to waste the valuable money of my estimable client." While their closets are unsanitary, and disconnecting chambers practically unknown, any amount of labour is expended upon nickel finishings and wood casings. They enjoy complicating hot and cold water taps and douches, but the enamel on their baths will scarcely bear looking at, much less the slightest blow. Only one firm shows any sign of breaking out in a new direction, and their speciality is peculiar. It consists of an arrangement by which the w.c. flushes can be taken direct from the household cistern with no intermediate flushing tank, and the means by which this highly-desirable end is attained is by suddenly breaking the flush-pipe in its downward course, and then about two inches lower down continuing the pipe with a trumpet-shaped receiver to catch the water as it falls from the pipe above. It was in vain to point out that the principal object of the long, straight flushing-pipe was thereby defeated, and that instead of the flush discharging into the basin like a veritable cascade, it merely trickled lazily round and then dribbled into the trap. It was speaking to deaf ears. Their drain-pipes are improving, and the glaze is good, but the internal surface is generally of the texture of rough cast; they are vastly ignorant of how to lay them properly, and have never heard of such things as gaskets. Two forms of junctions will serve all purposes; one makes its connection at a right angle, and the other at an angle of 60 deg. That their sanitary systems work at all is due to the fact that they employ pipes of a diameter you might walk through, but chiefly *because the soil is absorbent.* Disease is kept away by the germ-killing propensities of a brilliant sun, and the water supply in most towns (collected from the melting snows of the Alps or Apennines) is generally very good.

In sanitary knowledge, apart from engineering, the Italians are before us. The streets are washed —not watered—with disinfectant at daybreak, and even in the Exhibition a man goes round and sprinkles all the floors with "Lysoform," receiving from the head of the department a certificate to the effect that the visit has been made. There is as yet no law against expectoration; but the number of inventors who have turned their attention to antiseptic, disinfecting, folding, and collapsible spittoons is remarkable. The public buildings are cleaned down with patent vacuum dust extractors—an English invention, as usual, taken full advantage of by another nation—belonging to the Corporation, and the ratepayers are being urged to employ them for the cleaning of domestic carpets. And many of them do; that is the strangest part of it to an Englishman. Till now they have swept, or left unswept, their carpets, and it cost nothing; they see that this new thing is better, and are prepared to pay for it. O that England were not so conservative and afraid to learn!

Years spent in Italy and the last few weeks in Milan show that we have a wrong idea of Italy and a wrong idea of ourselves. Italy is an undying country; Rome is eternal; and Milan stands among the immortals. Utterly destroyed by Barbarossa, sacked and burnt a dozen times, captured by nearly every conqueror since Charles VIII. marched into Italy, Milan is to-day, in spite of this strenuous past, a great city of the present, and will become a greater city of the future. While the desolated site of the decorative arts is being cleared of rubbish, the authorities are receiving fresh applications for spaces in the new building, which the architects are engaged in preparing, and before these lines appear in print there will have arisen a new pavilion, complete and finished.

And we sit in our "right little, tight little island," pluming ourselves that we are the most energetic nation on the earth, content with the

THE TRANSPORTATION BUILDING.

mastery of trade we won long ago, wondering why it is slipping from us. This is the reason: we are self-satisfied, all-sufficient unto our own needs. Like the tortoise and the snail, Great Britain allows her rivals to outstrip her. While Switzerland grants £20,000 to her section at Milan, Germany £18,500, France £16,000, and Hungary £12,000, our Government grants £10,000, and the executive committee spends it to the least possible advantage.

Let us hope that in the forthcoming International Exhibition at Dublin we shall at least make a representative effort to hold our own at home.

ROBERT W. CARDEN,
Special Correspondent to the Review.

THE AUTOMOBILE AND CYCLE BUILDING.

A Sketch of Irish Ecclesiastical Architecture.

VI.—IRISH ROMANESQUE.—PART II.

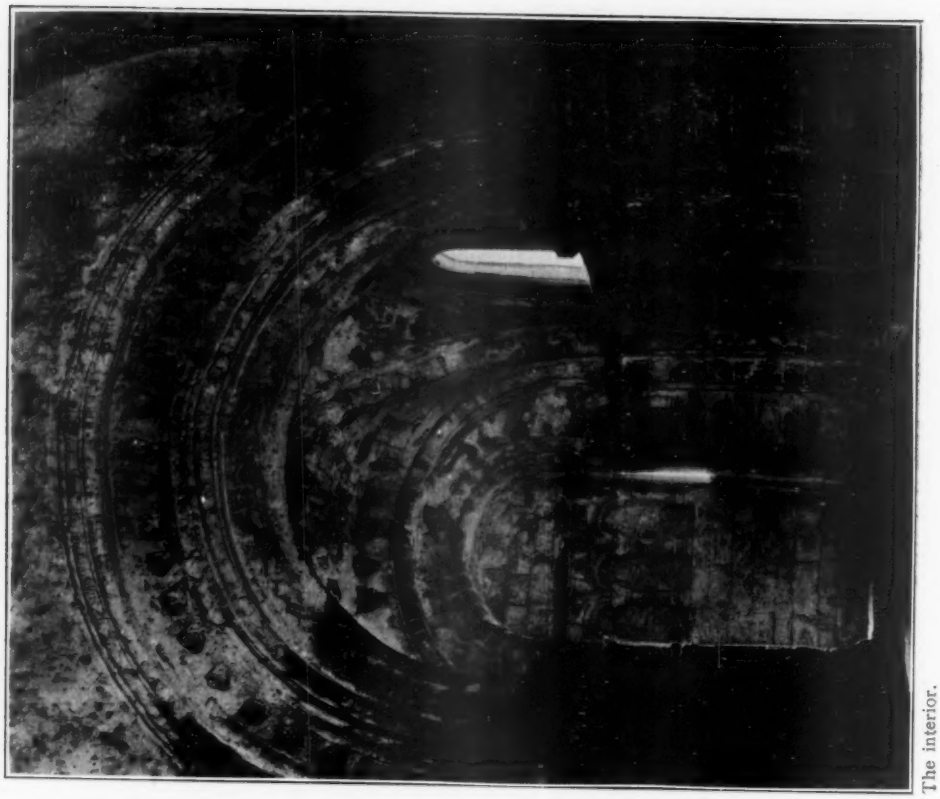
In the first part of this article reasons were given for believing that Irish Romanesque is not independent of or anterior to the somewhat similar architecture of England or of Normandy: but, as has been suggested already, it would be a great mistake to suppose that this Irish architecture is in general a mere copy of a foreign style. At Cormac's Chapel, for instance, the transverse or diagonal vaulting-ribs of the roofs below, the radiating pointed arch which supports the external roofs of nave and chancel, are parts of a building which is in plan the direct descendant of those with double stone roofs already described, such as the self-contained monastery at Kells; the Chapel agrees with the earlier examples even in having been three-storied, though at Cashel the wooden floor divided the space above the inner stone roof, and at Kells that below it. So too the round apse did not establish itself in Ireland along with Norman ornament, though there is an oblong altar-compartment at Cashel, east of the chancel—the strange fragment of building jutting out to the east of the chancel arch at Kilmalkedar seems to be the remains of a similar recess, which the present chancel superseded.[57] Cormac's Chapel contains many capitals more like the usual Norman types than is frequently the case in Irish Romanesque buildings, but even these are not precisely similar; and the pilasters in the nave, in spite of the zigzags, lozenges, and chequers cut on them, are distinctively Irish; they are in general effect somewhat like those on the west front of Ardfert Cathedral. Except for the square towers which stand as transepts to it—much as do those at Exeter Cathedral, begun in 1112—the Chapel is essentially an Irish building, in spite of its doorways and arcading—of the chevron and billet and bead with which it is ornamented.

And in general the plan of Irish Romanesque buildings follows the old lines—a nave and square-ended chancel without aisles. In fact it may be said that the ornament, largely of Norman character, is merely cut out of or laid on to an Irish church. The croft above the chancel is clearly indicated also at St. Saviour's, Glendalough, and even at Jerpoint Abbey; we shall find still later instances of it.[58] The plan of the church at Inismain (which has a late Irish Romanesque chancel arch), with rooms attached to form one (at least) of the transepts, carries out the

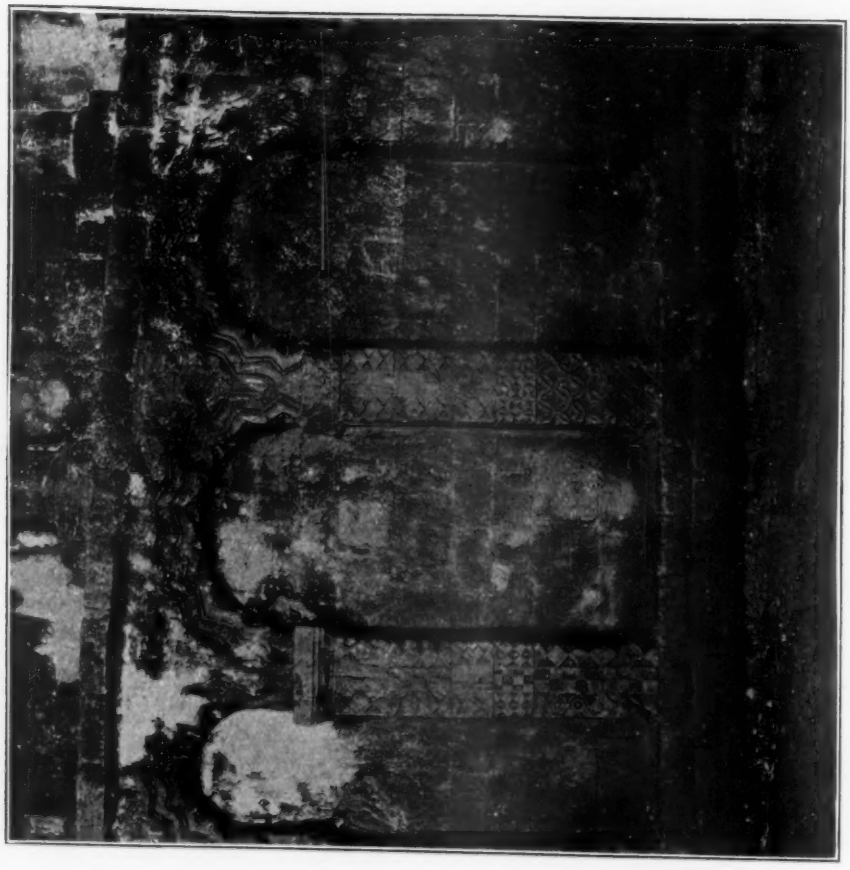
CASHEL, SHOWING CORMAC'S CHAPEL.

[57] There are said to be similar 'square apses' at Clamecy, near Nevers, and at Laon, in France, also at Sion in Switzerland.

[58] The doorway of St. Flannan's Church at Killaloe, which has a similar croft over the nave, appears, from the character of the capital on the north (which resembles some in the choir at Canterbury Cathedral, in the north porch at Wells, and still more closely others at New Shoreham), to belong unmistakably to no very early period in the twelfth century. There is no distinct sign that the doorway is an insertion; but, if it is not, the building—particularly its triangular-headed windows—must be a very marked piece of archaism.



The interior.



The arcading.

CORMAC'S CHAPEL.

CORMAC'S CHAPEL, CASHEL.

THE ROOF CHAMBER.

sloping sides of openings, which we noticed in the earliest dry-stone buildings of Ireland, still occur, not only at Inismain, but in the chancel arch at St. Caimin's, in the splendid doorway of Clonfert Cathedral, in a window of the small church at Rahan, besides other examples.

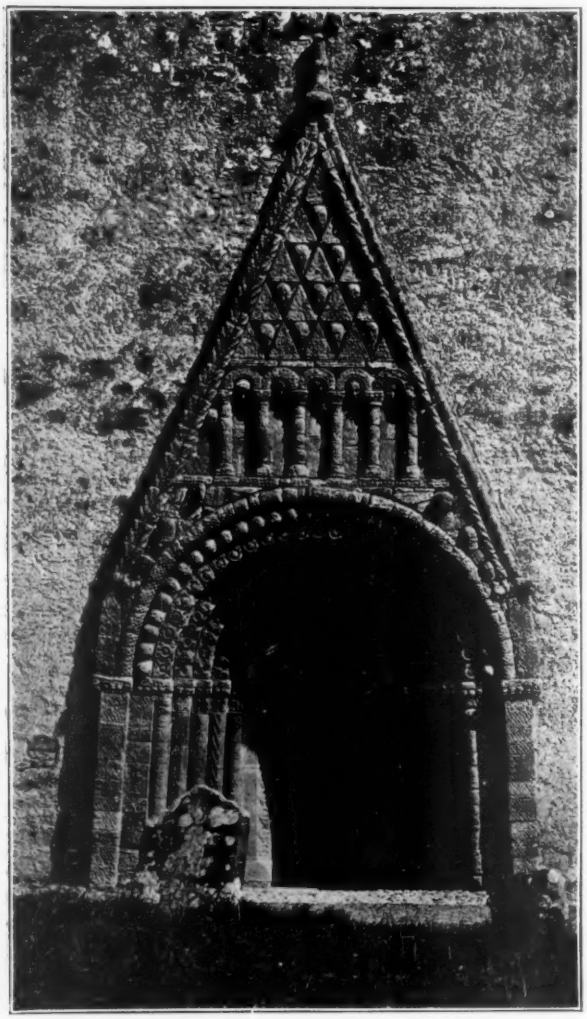
As has been already indicated, capitals of ordinary Norman types are rather exceptional; though there is usually a distinct abacus below the arch, the rest of the capital is often little more than a block with ornament carved on it—incised or in low relief. This ornamentation—in spiral, key, or interlaced patterns—sometimes reminds one of the High Crosses or the grave-slabs.

Beneath the chancel arch of the larger church at Rahan, the beads which stand out under the abacus are really made by combining three curved pear-shaped ornaments or leaves, and seem to be derived from the same idea in a rather different form. And the square-headed doorway there with sloping sides[59] is itself a strong instance of Irish conservatism—like the windows in the later Round Towers. Then there are the single stone roofs—as at Kilmalkedar, where they covered both nave and chancel—which are like those in earlier Irish buildings; as are also the barrel vaults, whatever roof they had above them, as at Tuam—the building of these went on till a far later date. The *antæ*, or corner-pilasters, are still found, as at Clonfert and Freshford, and at Kilmalkedar, where they extend up the line of the gable.[60] But at the east end of the chancels at Tomgraney and at Banagher (Co. Londonderry), at all four corners of the nave of *Teampull-na-Hoe*, Ardfert, and in some other examples, the place of these is taken by slender pillars with capitals finishing off the angles of the walls; at Ardfert these support a cornice decorated with beads. Except the *antæ*, buttresses of this period are most uncommon. On the other hand there is sometimes, as in the early work and in the Round Towers, a plinth; for instance, on the north side of the chancel at Tomgraney. The

CORMAC'S CHAPEL.

[59] See Article II. (August, 1905), pp. 75, 76.

[60] See illustration in Article V. Part II. p. 141.



DOORWAY, CLONFERT CATHEDRAL.

triple spiral[61] commonly used in the centre of crosses on grave-stones; there is some similar ornament in the same position below the chancel arch in the Nuns' Church at Clonmacnoise, and at a distance it bears considerable resemblance to the ball-flower, which was used in France at the end of the twelfth century. The pillars are by no means always parts of a round, some of them take the form of flat pilasters or are octagonal, as in the doorway at Clonfert. They often stand out but little; in the chancel arch and doorway of the Nuns' Church at Clonmacnoise, for instance, they—and their capitals—correspond very closely in section with the 'orders' of the arch above, as if they were just cut out of an opening receding by square steps. At Rahan, below the arch already mentioned, the innermost column is cut into small shafts at the corners, like the piers of the nave in Limerick Cathedral and of the south transept and western part of the nave at Jerpoint Abbey; or, like some late Norman buttresses, as at Glastonbury and Dunstable. The bases are often but slightly marked; sometimes, as at the foot of these corner-shafts at Rahan, as well as in the doorway of the Round Tower at Timahoe, they assume an elongated 'bulbous' form, more like part of a Saxon baluster-shaft than an ordinary Norman base. These pillars or pilasters are often decorated all over with patterns, incised or in low relief. This ornament (as has been said already) is frequently of chevron or lozenge; but it is often of distinctly Irish character. The square orders of the arches are usually cut into chevron, 'interrupted chevron,' or some similar Norman pattern, or into 'beak-heads,' but in some cases, notably in the doorway at Freshford, an elaborate 'battlement' pattern is used (like the later Irish battlements), and on the soffit of the arch this is further elaborated and combined so as to form a sort of cross. This ornament, as opposed to the simple 'battlement' moulding, is very rare in Norman architecture elsewhere,[62] but it is curious that it is found (as well as its simpler form) in the representation of an arch in a Greek MS. "of the ninth or tenth century." The soffit of the chancel arch at Kilmalkedar is decorated with rosettes, such as have been already mentioned in connection with the doorway of the Round Tower at Kildare. Besides the main features of the ornament, the arches often have much subordinate decoration—lines running parallel to and emphasising the zigzagged edges, and beads, of which the Irish made much use, whether by themselves or to enrich other carving.

ARTHUR C. CHAMPNEYS.

NOTE.—The photograph of exterior of Cormac's Chapel on page 149 is by Lawrence, of Dublin. The rest of the views are taken by the author and developed by Messrs. Seaman, of Ilkeston.

(To be continued.)

[61] See Article V.

[62] Parker says that this ornament "seems to be almost peculiarly Irish, though some specimens very similar occur among the fragments of the Norman buildings at Windsor Castle." *Notes on the Architecture of Ireland*, in the *Gentleman's Magazine*, April, 1864, p. 414. It appears (not doubled) on the door-jambs at Aghadoe. The doubled form, like a cross, closely resembles patterns in the Book of Kells. A very plain form of the pattern (not doubled) is carved within the semi-circular tops of scollops upon capitals in the nave of Hereford Cathedral and at Dorchester, near Oxford.

The London Traffic Commission Report.

It would be an exceedingly doubtful benefit if in the present condition of the art of civil architecture in England, any great or wide scheme of street construction or improvement were launched upon London. We have not at present the consistency of architectural tradition and thought, or simplicity of outlook, which is requisite for producing the design of a single complete street or public place. Moorgate Street, King William Street, Regent Street, or Carlton House Terrace are as far removed from present-day ideals and possibilities as the Finsbury Circus of a few years back, Gower Street, or Portland Place.

It is earnestly to be hoped that fate will considerably delay, as it is quite likely to, the prosecution of such drastic site-production as the new thoroughfares scheme of the London Traffic Commission, until the education of those into whose hands the erection of the requisite new buildings will fall has procured a more proper appreciation of the decencies and proprieties of civil architecture than evidently now exists amongst us. It may be taken for granted that the London of nowadays will not stand the Haussmann methods of the Third Empire, or submit to a domination like that of Nash in the Regency era. We are too fully awake to the preciousness of personal liberty and to the beauty of architectural freedom to take kindly to the sacrifice of idiosyncrasy or of that advertisement which peculiarity of design affords, and being free and enlightened it is frankly impossible to impose either a bondage of imperial will or the direction which blindness accepts willingly and uncritically from men of light and leading. Present architectural conditions are not advantageous to any broad scheme of rebuilding for London; the true interest of architecture, as well as the temper of taste, would be best served by making the most of what existing good buildings and streets we possess. The rising tide of appreciation for genuine building art will, it is to be hoped, ere long gain sufficient force to carry away with its impetus the commercial character which to-day dominates nearly all other considerations; it being remembered that the architecture involved in the operation of street improvements is almost wholly commercial in purpose. Chastened by such reflections we do not view with eagerness the prospect of the two new main avenues from east to west and from north to south suggested by the Advisory Board of Engineers to the Royal Commission, and published with their Report. These two great avenues are not presented as carefully thought-out schemes, but rather as sketch suggestions, and they are consequently open to criticism in such quantity that other important street improvements, also indicated by the Advisory Board, may be overlooked; but of all the suggestions naturally the more heroic involve the more architectural problems and perforce almost monopolise our attention. The architectural aspect of the heroic new main avenues which are to criss-cross London is wholly what their new buildings may make them. Neither one nor the other has any building of importance or interest upon or in its line of route, and no architectural effects are gained by contact with intersecting roads of importance. From west to east the new avenue makes hay of the square gardens between Lancaster Gate and the Foundling Hospital *en route* for Liverpool Street *via* Pentonville Hill, terminating its blessedness at Commercial Road eastwards; while that from the north exposes *en route* the seamy side of Islington, again in its way towards the foot of Pentonville Hill. No works of architecture are sought for in this route until Staple Inn is found and immolated, being in the way of the southern arm of the cross, which is to be brought over the river cheek by jowl with Blackfriars Bridge. The principal architectural effect of these two great suggested avenues thus being the avoidance of such interesting buildings and the destruction of others, it becomes evident how little architectural considerations have weighed with the preparation of the scheme.

It is not probably necessary to dwell at length on the practicability of the scheme of main avenues, as the expenditure it would necessitate when faced would be found so large and the advantages gained so indefinite that its accomplishment would not be ultimately achieved. London is after all a collection of buildings more or less useful, and the almost blind cutting of two huge arteries is not likely to commend itself to the bulk of its inhabitants, whose main interest is neither to reach Whitechapel from Bayswater or the Borough from Barnsbury without contact with the heart of the City and with its interests. The policy of this part of the plan appears clearly to be to find lines of least resistance in residential value, and so far as possible to make short and direct cuts from end to end of the tangle which should afford space enough for rapid locomotion by double tramway services.

The need for more practicable improvements in existing thoroughfares, however, has not been overlooked in the report. The published street plan indicates many of considerable importance and usefulness and of more practicable expense. Nearly all these widenings are designed to benefit the south-western district and to make room for omnibuses and trams *en route* for Putney and Hammersmith, while south of the river the

Wandsworth Road is the only route favoured with attention.

For the rest the new main avenues already dealt with have to suffice with the new bridge east of the Temple, a position difficult to justify in view of the position of Aldwych and the absence of any great widening in Fleet Street, while on the Surrey side it only adds a third wide road between those of Waterloo and Blackfriars.

Space forbids reference to all the points of interest in the street plan, but some may be instanced as affording not only relief to traffic at congested points, but as offering architectural effects of interest and often of that peculiarly picturesque construction which the varied buildings of an historic city like London can produce.

First as to Hyde Park. The Commission street plan suggests the widening of Bayswater Road, also extended along Kensington Gardens, and the rounding of the Marble Arch corner into Park Lane. There is undoubtedly the possibility of an economical artistic improvement in this suggestion. A fair slice of the park and gardens, say 100 ft. wide, should be taken by setting back the enclosing railings sufficiently to give an island strip of trees, lawns, and beds between double carriage-ways. The trees and shrubs are there already, with the roadway on one side, so the formation of a park boulevard road for a mile and a half would be easily obtained.

The Marble Arch corner has been already the subject of a crude suggestion from outside. The western end of Oxford Street widens with considerable dignity at Hereford Gardens, and if the block of Camelford House, with its quaint forecourt and stables, and the two houses or so at the corner of Park Lane could be put into the scheme a really fine place could be obtained, receiving the traffic from west and east and from north and south.

It may sound dreadful to some, but would, I am sure, in spite of all prejudices, prove a beautifying boon to all classes if the park and its eastern roadway were combined with Park Lane, so that one of the most charming effects in London of picturesque combination of house and park architecture might be realised.

The suggestion for the widening of Knightsbridge west of Albert Gate and Kensington Gore could also be dealt with similarly, and Hyde Park and Kensington Gardens would thus not only incorporate some of their beauty with the surrounding thoroughfares, but would give inexpensive relief to the traffic. What is true of Hyde Park applies with equal if not greater force to the Green Park. The Commission plan suggests the most obvious need of all in the formation of a road parallel with its eastern boundary. If this were carried out it would be reasonable to widen the Piccadilly way by including a park strip on the north, as traffic could divert where Piccadilly would narrow at Berkeley Street into Jermyn Street or into the extended Pall Mall—a scheme pressed many years ago upon the public by Sir Charles Barry. Constitution Hill would widen itself without troubling anybody.

The eastern side of St. James's Park remains to be dealt with. The Commission suggest the removal of the Duke of York's Column and steps, and some heroic dealing with the cliff that would be left. It is difficult to advise otherwise if Carlton House Terrace is to be left. The column, statue, and steps are really quite good for London, and till we know that we can do better should be left. Architecture would much prefer that Nelson's Column should first be revised; and Carlton House Terrace is certainly good enough to be left awhile. If the new eastern side thoroughfare were continued parallel with the Government offices through the site of the present County Council offices, shortly to be evacuated, it would meet the base of the Haymarket and receive the north to south traffic almost as well as through Waterloo Place and the Column. The extension past Storey's Gate through Princes Street to the west front of the Abbey is too good not to be done, and very soon too.

These marginal utilisations of the parks are nearly all included in the recommendations of the Commission, and should not be lost sight of. The pleasure of streets made park-like in a city is one that we know little of in London, and yet we have more opportunities of producing delightful boulevards of this character than any other European city. It is difficult to realise any objections of real force to the process of widening the public thoroughfares around the public parks; the open space will not be diminished, the trees will not be disturbed, more than sufficient preserves will be retained in each case, and multitudes along the lines of their daily routine of toil will have the refreshment and pleasure of tree-shaded garden walks and drives who are now excluded by railings unduly pressed to the boundaries of ancient ownerships which are no longer effective as against public rights.

We have been confined to the consideration of the possible architectural effect of the results of the Commission's deliberations, and have found abundant food for reflection upon its possibilities when the happy day comes that the public awakes to the existence both of its national architecture and, we earnestly endeavour to hope, of its architects.

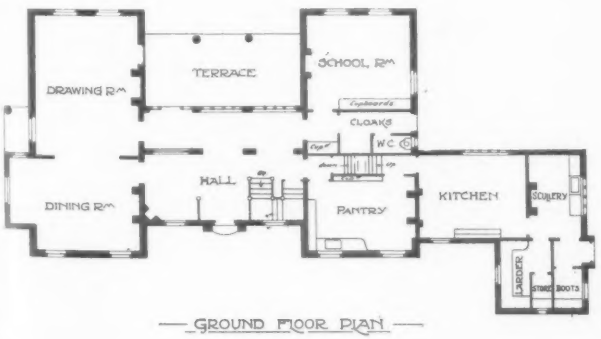
BERESFORD PITE.

Photo : Dann & Lewis.

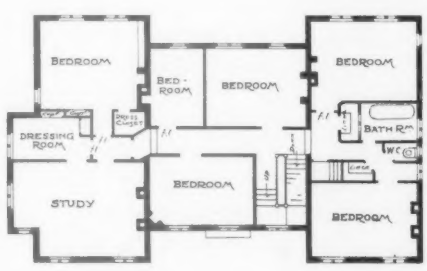
BREACH HOUSE, CHOLSEY. THE HALL.

Current Architecture.

BREACH HOUSE, CHOLSEY.—This house was designed by Mr. Edward Warren, architect, for his own use. It is built of local bricks, overlaid with "fine-cast" or rough stucco, and colour-washed, and the roofs are covered with old red tiles obtained from neighbouring farm buildings. The corners of the house face almost exactly the cardinal points of the compass. The site is upon a spur of the Berkshire Downs, and about 300 ft. above the sea, commanding fine views of the Thames Valley and the Chilterns. The builders were Messrs. Bosher & Sons, of Cholsey. Most of the joinery was carried out by Messrs. S. Elliott & Co., of Reading; while chimney-pieces, Portland-stone columns, etc., were supplied by Messrs. Holloway Bros. and Mr. T. E. Jago, of London; marble flooring for the hall by Messrs. Arthur Lee & Bros., of Hayes; iron casements by Messrs. Clubb & Son, of Hampstead; and leaded glazing by Mr. H. J. Salisbury.



GROUND FLOOR PLAN



BREACH HOUSE CHOLSEY

Scale of 10 5 0 5 10 15 20 feet

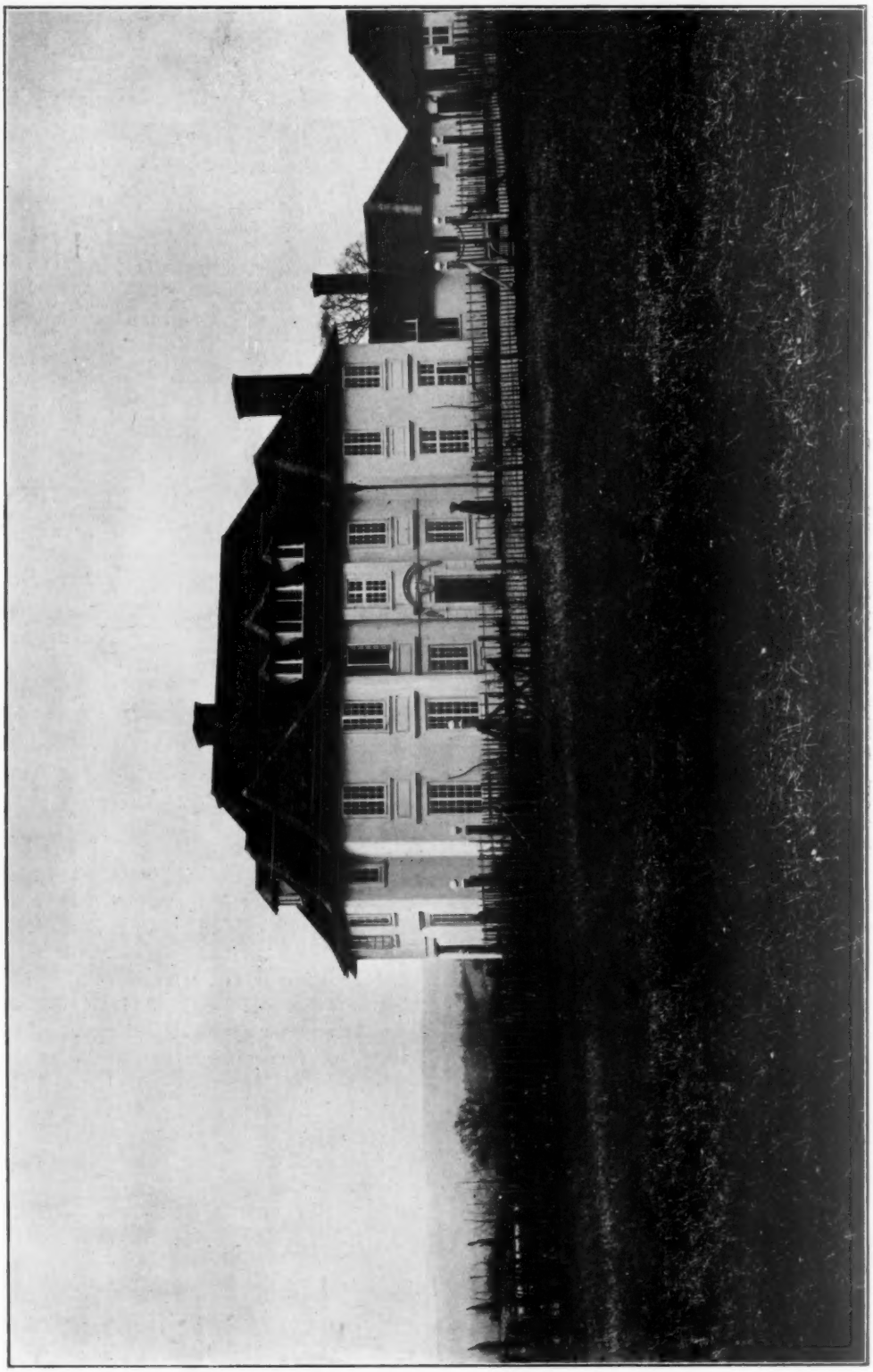


Photo: Dunn & Lewis.

BREACH HOUSE, CHOLSEY. ENTRANCE FRONT.
EDWARD WARREN, ARCHITECT.

Photo: Dunn & Lewis.

BREACH HOUSE, CHOLSEY. GARDEN FRONT.
EDWARD WARREN, ARCHITECT.

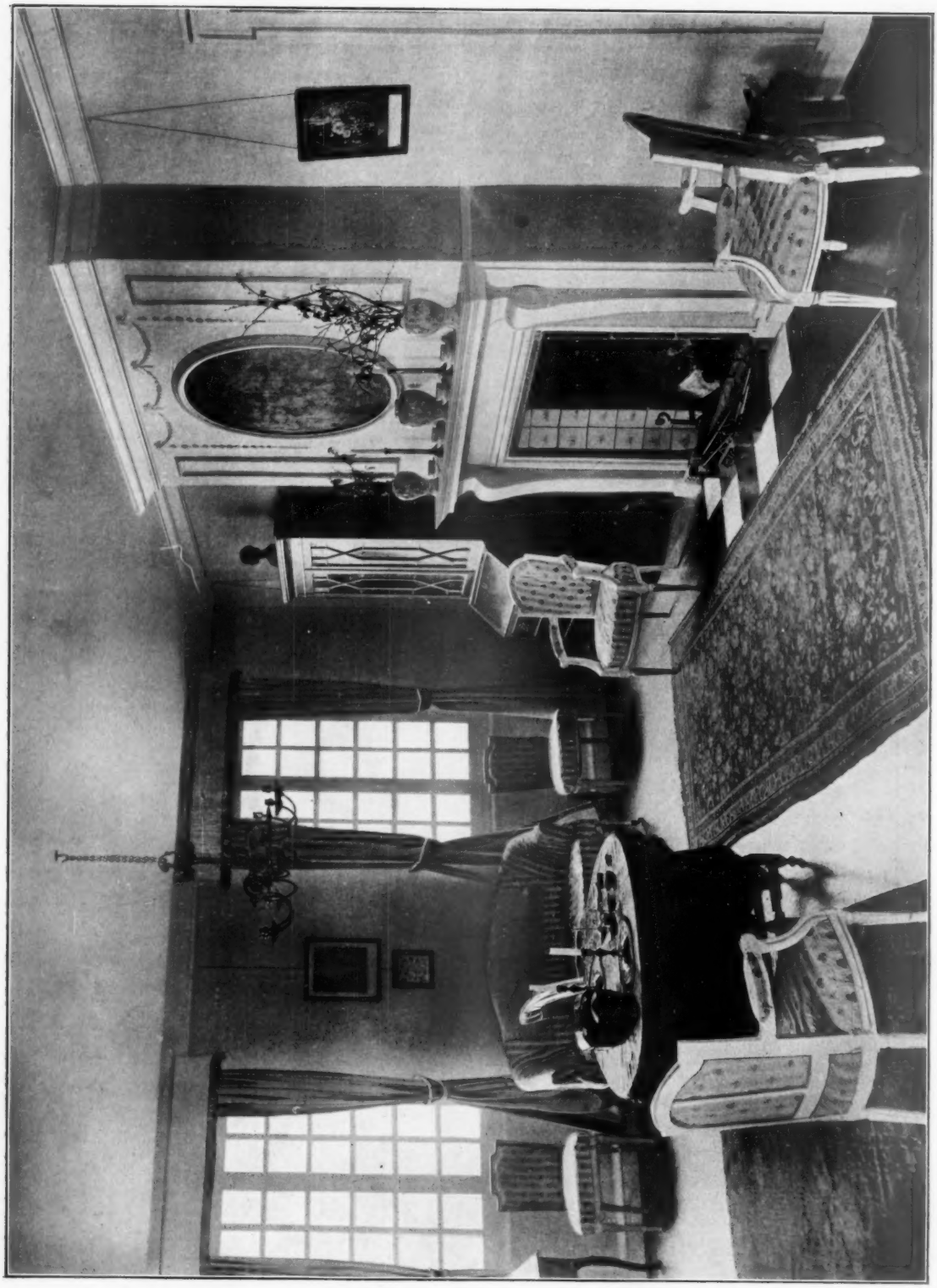


Photo: Dunn & Lewis.

BREACH HOUSE, CHOLSEY. DRAWING-ROOM.

EDWARD WARREN, ARCHITECT.